



SEQUENCE LISTING

<110> Chakravarti, Shukti
Case Western Reserve University

<120> Gene Expression Profiling of
Inflammatory Bowel Disease

<130> 021825-004720US

<140> US 10/084,892

<141> 2002-02-27

<150> US 60/160,835

<151> 1999-10-21

<150> US 09/694,758

<151> 2000-10-23

<160> 180

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1560

<212> DNA

<213> Homo sapiens

<220>

<223> monocyte-derived neutrophil chemotactic factor
(MDNCF); interleukin 8 (IL-8) precursor; small
inducible cytokine, subfamily B, member 8 (SCYB8);
chemokine (C-X-C motif) ligand 8 (CXCL8)

<400> 1

```
ctccataagg cacaaacttt cagagacagc agagcacaca agcttctagg acaagagcca 60
ggaagaaacc accggaagga accatctcac tgtgtgtaaa catgacttcc aagctggccg 120
tggtctctct ggcagccttc ctgatttctg cagctctgtg tgaagggtgca gttttgccaa 180
ggagtgtctaa agaacttaga tgtcagtgc aagagacata ctccaaacct ttccacccca 240
aatttatcaa agaactgaga gtgattgaga gtggaccaca ctgcgccaac acagaaatta 300
ttgtaaagct ttctgatgga agagagctct gtctggacce caaggaaaac tgggtgcaga 360
gggttgtgga gaagtttttg aagagggtct agaattcata aaaaaattca ttctctgtgg 420
tatccaagaa tcagtgaaga tgccagtga acttcaagca aatctacttc aacacttcat 480
gtattgtgtg ggtctgttgt aggttgcca gatgcaatac aagattcctg gttaaatttg 540
aatttcagta aacaatgaat agtttttcat tgtaccatga aatatccaga acatacttat 600
atgtaaagta ttattttatt gaatctacaa aaaacaacaa ataattttta aatataagga 660
ttttcctaga tattgcacgg gagaatatac aaatagcaaa attgggcca gggccaagag 720
aatatccgaa ctttaatttc aggaattgaa tgggtttgct agaatgtgat atttgaagca 780
tcacataaaa atgatgggac aataaatttt gccataaagt caaatttagc tggaaatcct 840
ggattttttt ctgttaaatac tggcaaccct agtctgctag ccaggatcca caagtccttg 900
ttccactgtg ccttggtttc tcctttattt ctaagtggaa aaagtattag ccaccatctt 960
acctcacagt gatgttgtga ggacatgtgg aagcacttta agttttttca tcataacata 1020
aattattttc aagtgttaact tattaaccta tttattttt atgtatttat ttaagcatca 1080
aatatttttg caagaatttg gaaaaataga agatgaatca ttgattgaat agttataaag 1140
atgttatagt aaattttatt tatttttagat attaaatgat gttttattag ataaatttca 1200
atcagggttt ttagattaaa caaacaaaca attgggtacc cagttaaatt ttcatttcag 1260
atatacaaca aataattttt tagtataagt acattattgt ttatctgaaa ttttaattga 1320
actaacaatc ctgattttgat actccagtc ttgtcattgc cagctgtgtt ggtagtgctg 1380
tgttgaatta cggaataatg agttagaact attaaaacag ccaaaactcc acagtcaata 1440
ttagtaattt cttgctgggt gaaacttggt tattatgtac aaatagattc ttataattat 1500
atttaaataga ctgcattttt aaatacaagg ctttatattt ttaactttta aaaaaaccgg 1560
```

<210> 2
 <211> 1895
 <212> DNA
 <213> Homo sapiens

<220>
 <223> melanoma growth stimulatory activity (MGSA); GRO1
 oncogene (GRO1, GROa); SCYB1; chemokine (C-X-C
 motif) ligand 1 (CXCL1)

<400> 2
 gctttccagc cccaaccatg cataaaagggt gttcgcggat ctcgagagagc cacagagccc 60
 gggccgcagg cacctcctcg ccagctcttc cgctcctctc acagccgcca gacccgctg 120
 ctgagcccca tggcccgcg cgtctctctc gccgccccca gcaatccccg gctcctgcga 180
 gtggcactgc tgctcctgct cctggtagcc gctggccggc gcgcagcagg tgggtaccgg 240
 cgccctgggg tccccgggcc ggacgcggct ggggtaggca cccagcgccg acagcctcgc 300
 tcagtcaagt agtctcttct tccctaggag cgtccgtggc cactgaactg cgctgccagt 360
 gcttgacagc cctgcaggga attcacccca agaacatcca aagtgtgaac gtgaagtccc 420
 ccggacccca ctgcgcccac accgaagtca tgtaagtcgc gcccgcgct gcctctgcca 480
 ccgcccgggt cccagaccct cctgctgccc caaccctgtc cccagcccga cctcctgcct 540
 cagcagattc ccttccctct gcagagccac actcaagaat gggcggaag ctgcctcaa 600
 tctgcattcc cccatagtta agaaaatcat cgaaaagatg ctgaacagggt gagttatggt 660
 ttccatgtac acaggcgact ggagccggtg gtcagaaata ctggcatgtg cccctaaaaa 720
 ataaaatcag gaaaaccag ggggttagtg aaggactaga aattgggatt attgttttca 780
 caattaaggt ttcctttacg ataattactg ctctggtgcc agaggatatt cccaatgcct 840
 ggcgtcccca ccctggttct tcttcgttc caatgaatgt aggtaaaact gccttcattt 900
 gaggccaggt aggacaaaac gcaacagggt ctggctgttt ttaatccaat agtacagtgg 960
 agaccaccgc cccaccccac cccattcct aaaagagcat cccaagctta gaggtccctg 1020
 ccacacagca cagctgtcat aggcagtagc cacttggttg ccaggctggg gaaactgcat 1080
 tcggagaact ctagaggctg gaggagcagg gcaggagaag agtggtgtgc aatcagcttt 1140
 cccgagcacc tactcagggc acccattttc tcattgcagt gacaaatcca actgaccaga 1200
 agggaggagg aagctcactg gtggctgttc ctgaaggagg cctgcccct ataggaacag 1260
 aagaggaaaag agagacacag ctgcagaggc cacctggatt gtgcctaatt tgtttgagca 1320
 tcgcttagga gaagtcttct atttatattt ttattcatta gttttgaaga ttctatgtta 1380
 atattttagg tgtaaaataa ttaagggtat gattaactct acctgcacac tgcctatta 1440
 tattcattct ttttgaaatg tcaaccccaa gttagttcaa tctggattca tatttaattt 1500
 gaaggtagaa tgttttcaaa tgttctccag tcattatgtt aatatttctg aggagcctgc 1560
 aacatgccag ccactgtgat agaggctggc ggatccaagc aaatggccaa tgagatcatt 1620
 gtgaaggcag gggaatgtat gtgcacatct gttttgtaac tgtttagatg aatgtcagtt 1680
 gttattttatt gaaatgattt cacagtgtgt ggtcaacatt tctcatgttg aaactttaag 1740
 aactaaaatg ttctaaatat cccttggaac ttttatgtct ttcttgtaag gcactatgcc 1800
 ttgttttaag gtagttttac agtgtttctg gcttagaaca aaggggctta attattgatg 1860
 ttttcataga gaatataaaa ataaagcact tataag 1895

<210> 3
 <211> 1065
 <212> DNA
 <213> Homo sapiens

<220>
 <223> macrophage inflammatory protein 2 (MIP-2,
 MIP-2alpha); GRO2 oncogene (GRO2, GROb); melanoma
 growth stimulatory activity beta (MGSA-b); SCYB2;
 chemokine (C-X-C motif) ligand 2 (CXCL2)

<400> 3
 gaattaggca cgagagctcc ttgccagctc tctcctcgc acagccgctc gaaccgctg 60
 ctgagcccca tggcccgcg cagctctctc gccgccccca gcaatccccg gctcctgcga 120
 gtggcgctgc tgctcctgct cctggtagcc gccagccggc gcgcagcagg agcgccctg 180
 gccactgaac tgcgctgcca gtgcttgacg accctgcagg gaattcacct caagaacatc 240
 caaagtgtga aggtgaagtc ccccgaccc cactgcgccc aaaccgaagt catagccaca 300

ctcaagaatg	ggcagaaagc	ttgtctcaac	cccgcacgc	ccatgggttaa	gaaaatcatc	360
gaaaagatgc	tgaaaaatgg	caaatccaac	tgaccagaag	gaaggaggaa	gcttatttgg	420
ggctgttcct	gaaggagccc	tgcccttacag	gaacagaaga	ggaaagagag	acacagctgc	480
agaggccacc	tggattgcgc	ctaattgtgt	tgagcatcac	ttaggagaag	tcttctattt	540
atattttat	ttatttattt	atattgtttg	tttagaagat	tctatgttaa	tatttttatt	600
gtaaaaataag	gttatgattg	aatctacttg	cacactctcc	cattatattt	attgtttatt	660
ttaggtcaaa	cccaagttag	ttcaatcctg	attcatattt	aatttgaaga	tagaaggttt	720
gcagatattc	tctagtcatt	tgtaaatatt	tcttcgtgat	gacatatcac	atgtcagcca	780
ctgtgataga	ggctgaggaa	tccaagaaaa	tggccagtaa	gatcaatgtg	acggcagggg	840
aatgtatgtg	tgtctatttt	gtaactgtaa	agatgaatgt	cagttgttat	ttattgaaat	900
gatttcacag	tgtgtggtca	acatttctca	tgttgaagct	ttaagaacta	aaatgttcta	960
aatatccctt	ggacatttta	tgtctttctt	gtaagatact	gccttgttta	atgttaatta	1020
tgcagtgttt	ccctctgtgt	tagagcagag	aggtttcgat	attta		1065

<210> 4

<211> 5191

<212> DNA

<213> Homo sapiens

<220>

<223> monocyte-derived neutrophil chemotactic factor
(MDNCF); interleukin 8 (IL-8) precursor; small
inducible cytokine, subfamily B, member 8 (SCYB8);
chemokine (C-X-C motif) ligand 8 (CXCL8)

<400> 4

gaattcagta	accagggcat	tattttatcc	tcaagtctta	ggttgggttg	agaaagataa	60
caaaaagaaa	catgattgtg	cagaaacaga	caaacccttt	tggaaagcat	ttgaaaatgg	120
cattccccct	ccacagtgtg	ttcacagtgt	gggcaaattc	actgctctgt	cgtactttct	180
gaaaatgaag	aactgttaca	ccaaggtgaa	ttattttataa	attatgtact	tgcccagaag	240
cgaacagact	tttactatca	taagaaccct	tccttggtgt	gctctttatc	tacagaatcc	300
aagacccttc	aagaaaggtc	ttggattctt	ttcttcagga	cactaggaca	taaagccacc	360
tttttatgat	ttgttgaaat	ttctcactcc	atcccttttg	ctgatgatca	tgggtcctca	420
gaggtcagac	ttggtgtcct	tggataaaga	gcatgaagca	acagtggctg	aaccagagtt	480
ggaaccacga	tgctctttcc	actaagcata	caactttcca	ttagataaca	cctccctccc	540
acccaacca	agcagctcca	gtgcaccact	ttctggagca	taaacatacc	ttacttttac	600
aacttgagtg	gccttgaaata	ctgttcctat	ctggaatgtg	ctgttctctt	tcactttcct	660
ctattgaagc	cctcctatcc	ctcaatgcct	tgctccaact	gcctttggaa	gattctgtct	720
ttatgcctcc	actggaatta	atgtcttagt	accacttgct	tattctgcta	tatagtcagt	780
ctttacattg	ctttctctct	ctgatagacc	aaactcttta	aggacaagta	cctagtctta	840
tctattttcta	gattccccac	attactcaga	aagtactctc	ataaatgttt	gtggaactga	900
tttctatgtg	aagacatgtg	ccccttcact	ctgttaacta	gcattagaaa	aacaaatcct	960
ttgaaaagtt	gtagtatgcc	cctaagagca	gtaacagttc	ctagaaactc	tctaaaatgc	1020
ttagaaaaag	atatttttta	aattacctcc	ccaataaaat	gattggctgg	cttatcttca	1080
ccatcatgat	agcatctgta	attaactgaa	aaaaaataat	tatgccatta	aaagaaaatc	1140
atccatgatc	ttgttctaac	acctgccact	ctagtactat	atctgtcaca	tgggtctatga	1200
taaagttatc	tagaaataaa	aaagcataca	attgataatt	caccaaattg	tggagcttca	1260
gtatttttaa	tgtatattaa	aattaaatta	ttttaaagat	caaagaaaac	tttcgtcata	1320
ctccgtatct	gataaggaac	aaataggaag	tgtgatgact	caggtttgcc	ctgaggggat	1380
gggccatcag	ttgcaaatcg	tggaaatttc	tctgacataa	tgaaaagatg	agggtgcata	1440
agttctctag	tagggtgatg	atataaaaag	ccaccggagc	actccataag	gcacaaactt	1500
tcagagacag	cagagcacac	aagctttctag	gacaagagcc	aggaagaaac	caccggaagg	1560
aaccattctc	actgtgtgta	aacatgactt	ccaagctggc	cgtggctctc	ttggcagcct	1620
tcttgatttc	tgcagctctg	tgtgaaggta	agcacatctt	tctgacctac	agcgttttcc	1680
tatgtctaaa	tgtgatcctt	agatagcaaa	gctattcttg	atgctttggg	aacaaacatc	1740
ctttttatcc	agaaacagaa	tataatctta	gcagtcaatt	aatgttaaat	tgaagattta	1800
gaaaaaacta	tatataacac	ttaggaaata	taaaggtttg	atcaatatag	atattctgct	1860
tttataatct	ataccaggta	gcatgcatat	atttaacgta	aataagtaat	ttatagtatg	1920
tcctatttgg	aaccacggtt	acctatatata	tgtattaata	ttgagttgag	caaggtaact	1980
cagacaatcc	cactccttgt	agtatttcat	tgacaagcct	cagatttgtc	attaattcct	2040
gtctgggttta	aagataccct	gattatagac	caggcatgta	taacttattt	atatatttct	2100

gttaattctt	tctgaaggca	atctctatgc	tggagagtct	tagcttgcct	actataaata	2160
acactgtggt	atcacagagg	attatgcaat	attgaccaga	taaaaatacc	atgaagatgt	2220
tgatattgta	caaaaagaac	tctaactctt	atataggaag	ttgttcaatg	ttgtcagtta	2280
tgactgtttt	ttaaaaacaaa	gaactaactg	aggtcaaggg	ctaggagata	ttcaggaatg	2340
agttcactag	aaacatgatg	ccttccatag	tctccaaata	atcatattgg	aattagaagg	2400
aagtagctgg	cagagctgtg	cctgttgata	aaatcaatcc	ttaatcactt	tttcccccaa	2460
cagggtgcagt	tttgccaagg	agtgcataag	aacttagatg	tcagtgcata	aagacatact	2520
ccaaaccttt	ccaccccaaa	tttatcaaag	aactgagagt	gattgagagt	ggaccacact	2580
gcgccaacac	agaaattatg	taagtacttt	aaaaaagatt	agatattttg	tttttagcaaa	2640
cttaaaaatta	aggaaggtgg	aaatatattg	gaaagttcca	ggtgttagga	ttacagtagt	2700
aaatgaaaca	aaacaaaata	aaaatatattg	tctacatgac	atttaaatat	ggtagcttcc	2760
acaactacta	taaatgttat	tttggactta	gaactttatgc	ctgacttaag	gaatcatgat	2820
ttgaatgcaa	aaactaaata	ttaatctgaa	ccattttcttt	cttattttcag	tgtaaagctt	2880
tctgatggaa	gagagctctg	tctggacccc	aaggaaaaact	gggtgcagag	ggttgtggag	2940
aagtttttga	agaggtaagt	tatatatttt	ttaatttaaa	tttttcattt	atcctgagac	3000
atataatcca	aagtcagcct	ataaattttct	ttctgttgct	aaaaatcgtc	attaggatc	3060
tgccctttttg	gttaaaaaaa	aaggaatagc	atcaatagtg	agtttgttgt	acttatgacc	3120
agaaagacca	tacatagttt	gcccaggaaa	ttctgggttt	aagcttgtgt	cctatactct	3180
tagtaaagtt	ctttgtcact	cccagtagtg	tcctatttta	gatgataatt	tctttgatct	3240
ccctattttat	agttgagaat	atagagcatt	tctaacacat	gaatgtcaaa	gactatattg	3300
actttttcaag	aaccctactt	tccttcttat	taaacatagc	tcatctttat	attttttaatt	3360
ttatttttagg	gctgagaatt	cataaaaaaa	ttcatttctct	gtggtatcca	agaatcagtg	3420
aagatgccag	tgaacattca	agcaaactca	cttcaacact	tcattgtattg	tgtgggtctg	3480
ttgtagggtt	gccagatgca	atacaagatt	cctgggttaa	tttgaatttc	agtaaacatt	3540
gaatagtttt	tcattgtacc	atgaaatata	cagaacatac	ttatatgtaa	agtattattt	3600
atttgaatct	acaaaaaaca	acaaataatt	tttaaatata	aggattttcc	tagatattgc	3660
acggggagaat	atacaaatag	caaaattggg	ccaagggcca	agagaatatc	cgaactttta	3720
tttcaggaat	tgaatgggtt	tgctagaatg	tgatatttga	agcatcacat	aaaaatgatg	3780
ggacaataaaa	ttttgccata	aagtcaaatt	tagctggaaa	tcctggattt	ttttctgtta	3840
aatctggcaa	ccctagtctg	ctagccagga	tccacaagtc	cttgtttccac	tgtgccttgg	3900
tttctccttt	atttctaagt	ggaaaaagta	ttagccacca	tcttacctca	cagtgatgtt	3960
gtgaggacat	gtggaagcac	tttaagtttt	ttcatcataa	cataaattat	tttcaagtgt	4020
aacttattaa	cctatttatt	atttatgtat	ttattttaagc	atcaaatatt	tgtgcaagaa	4080
tttgaaaaaa	tagaagatga	atcattgtatt	gaatagtatt	aaagatgtta	tagtaaatatt	4140
attttattttt	agatatttaa	tgatgtttta	ttagataaat	ttcaatcagg	gttttttagat	4200
taaacaaaca	aacaattggg	taccagtgta	aatttttcatt	tcagatatac	aacaaataat	4260
tttttagtat	aagtacatta	ttgtttatct	gaaattttta	ttgaactaac	aatcctagtt	4320
tgatactccc	agtcttgtca	ttgccagctg	tgttggtagt	gctgtgttga	attacggaat	4380
aatgagttag	aactatttaa	acagccaaaa	ctccacagtc	aatatttagta	atttcttgct	4440
ggttgaaact	tgtttattat	gtacaaatag	attcttataa	tattatttta	atgactgcat	4500
ttttaaatat	aaggctttat	atttttaact	ttagtgtttt	tatgtgctct	cctaaattttt	4560
tttactgttt	ctgattgtat	ggaaatataa	aagtaaatat	gaaacattta	aaatataatt	4620
tgttgtcaaa	gtaatcaagt	gtttgtcttt	tttttagttt	tagcttattg	ggattctctt	4680
tgtttatatt	taaaattata	ctttgattta	gaaaacataa	atgcttcccc	ttagcattttt	4740
gttatggaaa	attacaaact	tttattttta	gaaaacagaa	ctcctttcca	gaaaataggtt	4800
acaaacagta	gtgtcctcca	cagaatgttg	gaaatgtttt	caactcccca	ctgtataacta	4860
tcttgctaatt	aagtctgtct	tcagatttctg	attaaccggt	ttgtatgtct	gtgcacttta	4920
gcatagctgg	acattaaaga	ggaaagagag	tacatattat	aagttgctta	tcagtaactg	4980
aggagtaaaa	ctgataaatg	tgaggcaaaag	aagtttaaaa	tatgggttaa	gcctaagcat	5040
atttgcaaac	aaatcaaaca	atactctgag	aagtaaaaaac	ataattattt	aattaacaaa	5100
tttcagtggg	taaattttat	aacaaattag	acacagttga	aaataaaatt	agaaaactag	5160
aaaatagaac	aaaagaaact	tctggaattc	a			5191

<210> 5
 <211> 905
 <212> DNA
 <213> Homo sapiens

<220>
 <223> interferon-induced transmembrane protein 2
 (IFITM2); interferon inducible protein 1-8D


```

<400> 5
caacacaggg gcagtctcca ggacctccac accattaaca agatgagcct tgtgctccct 60
tgggctctag agaggaagcc cctctgagcc ctcagcccct ctttcctccc tctcctaaag 120
taatttgatc ctcaggaatt tgttctgccc tcatctggcc ctggccagct ctgcatttga 180
caaatgccag gaagaggaaa ctgttgagaa aacggaacta ctggggaaaag ggagggctca 240
ctgagaacca tcccggtaac ccgaccgccg ctggtcacca tgaaccacat tgtgcaaacc 300
ttctctcctg tcaacagcgg ccagcctccc aactacgaga tgctcaagga ggagcaggaa 360
gtggctatgc tggggggggc ccacaacctt gctcccccg cgtccaccgt gatccacatc 420
cgcagcgaga cctccgtgcc tgaccatgtc gtctggtccc tgttcaacac cctcttcatg 480
aacacctgct gcctgggctt catagcattc gcctactccg tgaagtctag ggacaggaag 540
atggttgggc acgtgaccgg ggcccaggcc tatgcctcca ccgccaagtg cctgaacatc 600
tgggccctga ttttgggcat cttcatgacc attctgctcg tcatcatccc agtggttggtc 660
gtccaggccc agcgatagat caggaggcat cattgaggcc aggagctctg cccgtgacct 720
gtatcccacg tactctatct tccattcctc gccctgcccc cagaggccag gagctctgcc 780
cttgacctgt attccactta ctccaccttc cattcctcgc cctgtcccca cagccgagtc 840
ctgcatcagc cctttatcct cacacgcttt tctacaatgg cattcaataa agtgtatatg 900
tttct
905

```

```

<210> 6
<211> 696
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> macrophage inflammatory protein 1-beta (MIP-1beta)
precursor; small inducible cytokine A4 (SCYA4);
chemokine (C-C motif) ligand 4 (CCL4); activation
protein ACT-2 precursor; secreted protein G-26

```

```

<400> 6
ttcccccccc ccccccccc ccccgcccg gacacaggaca cagctggggt ctgaagcttc 60
tgagttctgc agcctcacct ctgagaaaa cttctttcca ccaataccat gaagctctgc 120
gtgactgtcc tgtctctcct catgctagta gctgccttct gctctccagc gctctcagca 180
ccaatgggct cagaccctcc caccgcctgc tgcttttctt acaccgcgag gaagcttcct 240
cgcaactttg tggtagatta ctatgagacc agcagcctct gctcccagcc agctgtggta 300
ttccaaacca aaagaagcaa gcaagtctgt gctgatccca gtgaatcctg ggtccaggag 360
tacgtgtatg acctggaact gaactgagct gctcagagac aggaagtctt caggggaagg 420
cacctgagcc cggatgcttc tccatgagac acatctcctc catactcagg actcctctcc 480
gcagttcctg tcccttctct taatttaatc ttttttatgt gccgtgttat tgtattaggt 540
gtcatttcca ttatttatat tagtttagcc aaaggataag tgtcctatgg ggatgggtcca 600
ctgtcactgt ttctctgtcg ttgcaaatc atggataaca catttgattc tgtgtgtttt 660
ccataataaa acttttaaat aaaatgcaga cagtta
696

```

```

<210> 7
<211> 988
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> macrophage inflammatory protein-2beta (MIP-2beta)
precursor; GRO3 oncogene (GRO3, GRO-gamma, GROG);
SCYB3; chemokine (C-X-C motif) ligand 3 (CXCL3);
melanoma growth stimulatory activity gamma

```

```

<400> 7
ctcgcacagc ttcccgcgc gtctgctgag ccccatggcc cagccacgc tctccgccgc 60
cccagcaat ccccggtcc tgccgggtggc gctgctgctc ctgctcctgg tggccgccag 120
ccggcgcgca gcaggagcgt ccgtggtcac tgaactgcgc tgccagtgtc tgcagacact 180
gcagggaatt cacctcaaga acatccaaag tgtgaatgta aggtcccccg gacccactg 240
cgcccaaacc gaagtcatac ccacactcaa gaatgggaag aaagcttgtc tcaacccgcg 300
atcccccatg gttcagaaaa tcatcgaaaa gatactgaac aaggggagca ccaactgaca 360

```

```

ggagagaagt aagaagctta tcagcgtatc attgacactt cctgcagggt ggtccctgcc 420
cttaccagag ctgaaaatga aaaagagaac agcagctttc tagggacagc tggaaaggac 480
ttaatgtgtt tgactatttc ttacgagggt tctacttatt tatgtattta tttttgaaag 540
cttgtatttt aatattttac atgctgttat ttaaagatgt gagtgtgttt catcaaacaat 600
agctcagtc tgaattttta attggaatat gatgggtttt aaatgtgtca ttaaactaat 660
athtagtggg agaccataat gtgtcagcca ccttgataaa tgacagggtg gggaactgga 720
gggtgggggg attgaaatgc aagcaattag tggatcactg ttagggtaag ggaatgtatg 780
tacacatcta ttttttatac ttttttttta aaaaaagaat gtcagttgtt atttattcaa 840
attatctcac attatgtgtt caacattttt atgctgaagt ttcccttaga cattttatgt 900
cttgcttgta gggcataatg ccttgtttaa tgtccattct gcagcgtttc tctttccctt 960
ggaaaagaga atttatcatt actgttac 988

```

<210> 8

<211> 328

<212> DNA

<213> Homo sapiens

<220>

<223> macrophage inflammatory protein 1-beta (MIP-1beta)
precursor; small inducible cytokine A4 (SCYA4);
chemokine (C-C motif) ligand 4 (CCL4); activation
protein ACT-2 precursor; secreted protein G-26

<400> 8

```

agtagacctc aaagggtccca tgggattcta atctgtctgc tccaagaact acagattcca 60
aaccaaaaga ggcaagcaag tctgcgctga cccagtgag tcctgggtcc aggagtacgt 120
gtatgacctg gaactgaact gagctgctca gagacaggaa gtcttcaggg aaggtcacct 180
gagcctggat gcttctccat gagccgcatc tcctccatac tcaggactcc tctccgcagt 240
tcctgtctct tctcttaatg taatctcttt tatgtgctgt attattgtat taggtgttat 300
ttccattatt tatattagtt tagccaaa 328

```

<210> 9

<211> 9721

<212> DNA

<213> Homo sapiens

<220>

<223> prointerleukin 1 beta (pro-IL-1beta);
interleukin-1 beta precursor; catabolin

<220>

<221> modified_base

<222> (135)..(136)

<223> n = g, a, c or t

<400> 9

```

agaaagaaa agagagagaa agaaaagaaa gaggaaggaa ggaaggaagg aagaaagaca 60
ggctctgagg aaggtggcag ttcctacaac gggagaacca gtggttaatt tgcaaagtgg 120
atcctgtgga ggcanncaga ggagtcccct aggccacca gacagggtt ttagctatct 180
gcaggccaga caccaaattt caggagggtt cagtgttagg aatggattat ggcttatcaa 240
attcacagga aactaacatg ttgaacagct tttagatttc ctgtggaaaa tataacttac 300
taaagatgga gttcttgtga ctgactcctg atatcaagat actgggagcc aaattaaaaa 360
tcagaaggct gcttgagag caagtccatg aaatgctctt tttccacag tagaacctat 420
ttccctcgtg tctcaaatac ttgcacagag gctcactccc ttggataatg cagagcgagc 480
acgatacctg gcacatacta atttgaataa aatgctgtca aattcccatt caccattca 540
agcagcaaac tctatctcac ctgaatgtac atgccaggca ctgtgctaga cttggctcaa 600
aaagatttca gtttcctgga ggaaccagga gggcaagggt tcaactcagt gctataagaa 660
gtgttacagg ctggacacgg tggtcacgc ctgtaatccc aacatttggg aggccgaggc 720
gggcagatca caaggtcagg agatcgagac catcctggct aacatggtga aaccctgtct 780
ctactaaaaa tacaaaaaat tagccggggt ttggcggcag gtgcctgtag tccagctgc 840
tggggaggct gaggcaggag aatggtgtga acccgggagg cggaacttgc agggggccga 900

```

gatcgtgcca	ctgcactcca	gcctgggcca	cagagtgaga	ctctgtctca	aaaaaaaaa	960
aaaagtgtta	tgatgcagac	ctgtcaaaga	ggcaaaggag	ggtgttccta	cactccaggc	1020
actgttcata	acctggactc	tcattcattc	tacaaatgga	gggctcccct	gggcagatcc	1080
ctggagcagg	cacttttgctg	gtgtctcggt	taaagagaaa	ctgataaactc	ttgggtattac	1140
caagagatag	agtctcagat	ggatattctt	acagaaacaa	tattcccact	tttcagagtt	1200
cacaaaaaaa	tcatttttagg	cagagctcat	ctggcattga	tctggttcat	ccatgagatt	1260
ggctagggta	acagcacctg	gtcttgacag	gttgtgtgag	cttatctcca	gggttgcccc	1320
aactcogtca	ggagcctgaa	ccctgcatac	cgtatgttct	ctgccccagc	caagaaaggt	1380
caattttctc	ctcagaggct	cctgcaattg	acagagagct	cccagggcag	agaacagcac	1440
ccaaggtaga	gacccacacc	ctcaatacag	acagggaggg	ctattggccc	ttcattgtac	1500
ccatttatcc	atctgttaagt	gggaagattc	ctaaacttaa	gtacaaagaa	gtgaatgaag	1560
aaaagtatgt	gcatgtataa	atctgtgtgt	cttccacttt	gtcccacata	tactaaattt	1620
aaacattctt	ctaactgtgg	aaaatccagt	attttaaatgt	ggacatcaac	tgcacaacga	1680
ttgtcaggaa	aacaatgcac	atltgcatgg	tgatacattt	gcaaaatgtg	tcatagtttg	1740
ctactccttg	cccttccatg	aaccagagaa	ttatctcagt	ttattagtcc	cctcccctaa	1800
gaagcttcca	ccaatactct	tttccccttt	cctttaactt	gatttgtaaa	tcagggtattc	1860
aacagagaaa	tttctcagcc	tcctacttct	gcttttgaaa	gctataaaaa	cagcgaggga	1920
gaaactggca	gataccaaac	ctcttcgagg	cacaaggcac	aacaggctgc	tctgggattc	1980
tcttcagcca	atcttcattg	ctcaagtatg	actttaatct	tccttacaac	taggtgctaa	2040
gggagtctct	ctgtctctct	gcctctttgt	gtgtatgcat	attctctctc	tctctctctt	2100
tctttctctg	tctctctctt	ccttccctct	tgcctcctct	ctcagctttt	tgcaaaaaatg	2160
ccaggtgtaa	tataatgctt	atgactcggg	aaatattctg	ggaatggata	ctgcttatct	2220
aacagctgac	accctaaagg	ttagtgtcaa	agcctctgct	ccagctctcc	tagccaatac	2280
attgctagtt	ggggtttggt	ttagcaaatg	cttttctcta	gacccaaagg	acttctcttt	2340
cacacattca	ttcattttact	cagagatcat	ttctttgcat	gactgccatg	cactggatgc	2400
tgagagaaat	cacacatgaa	cgtagccgtc	atggggaagt	cactcatttt	ctccttttta	2460
cacaggtgtc	tgaagcagcc	atggcagaag	tacctgagct	cgccagtga	atgatggctt	2520
attacaggtc	agtggagacg	ctgagaccag	taacatgagc	aggtctcctc	tttcaagagt	2580
agagtgttat	ctgtgcttgg	agaccagatt	tttcccctaa	attgcctctt	tcagtggcaa	2640
acaggtgtcc	aagtaaactc	gatttaaaga	ctactttccc	attacaagtc	cctccagcct	2700
tgggacctgg	aggctatcca	gatgtgttgt	tgcaagggct	tcctgcagag	gcaaatgggg	2760
agaaaagatt	ccaagcccac	aatacaagga	atccctttgc	aaagtgtggc	ttggaggagg	2820
aggagagct	cagattttag	ctgactctgc	tggcttagag	gttaggcctc	aagatccaac	2880
agggagcacc	agggtgcccc	cctgccaggc	ctagaatctg	ccttctggac	tgttctgcgc	2940
atatcactgt	gaaacttgcc	agggtgttca	ggcagctttg	agaggcaggc	tgtttgagct	3000
ttcttatgaa	cagtcaagtc	ttgtacacag	ggaaggaaaa	ataaacctgt	ttagaagaca	3060
taattgagac	atgtccctgt	ttttattaca	gtggcaatga	ggatgacttg	ttctttgaag	3120
ctgatggccc	taaacagatg	aaggtaagac	tatgggttta	actcccaacc	caagggaagg	3180
ctctaacaca	gggaaagctc	aaagaaggga	gttctggggc	actttgatgc	catggtattt	3240
tgttttagaa	agactttaac	ctcttccagt	gagacacagg	ctgcaccact	tgctgacctg	3300
gccacttggt	catcatatca	ccacagtcac	tcactaacgt	tggtggtggt	ggccacactt	3360
ggtggtgaca	ggggaggagt	agtataatg	ttcccatttc	atagtaggaa	gacaaccaag	3420
tcttcaacat	aaatttgatt	atccttttta	gagatggatt	cagcctatgc	caatcacttg	3480
agttaaactc	tgaaccaag	agatgatctt	gagaactaac	atatgtctac	cccttttgag	3540
tagaatagtt	ttttgctacc	tgggggtgaag	cttataacaa	caagacatag	atgatataaa	3600
caaaaagatg	aattgagact	tgaagaaaaa	ccattcactt	gctgtttgac	cttgacaagt	3660
cattttaccc	gctttggacc	tcacttgaaa	aataaagggc	tgagctggat	gatctctgag	3720
attccagcat	cctgcaacct	ccagttctga	aatattttca	gttgtagcta	agggcatttg	3780
ggcagcaaat	ggtcattttt	cagactcatc	cttacaagaa	gccatgttat	attcctgctg	3840
tcccttctgt	tttatatgat	gctcagtagc	cttccatagg	gcccagccat	cagcctagct	3900
aggtcagttg	tgcaggttgg	aggcagccac	tttctctggt	ctttatttta	ttccagtttg	3960
tgatagcctc	ccctagcctc	ataatccagt	cctcaatctt	gttaaaaaaca	tatttcttta	4020
gaagttttta	gactggcata	acttcttggc	tgcagctgtg	ggaggagccc	attggcttgt	4080
ctgcctggcc	tttgccccc	attgcctctt	ccagcagctt	ggctctgctc	caggcaggaa	4140
attctctcct	gctcaacttt	cttttggtgca	cttacaggctc	tctttaactg	tctttcaagc	4200
ctttgaacca	ttatcagcct	taaggcaacc	tcagtgaagc	cttaatacgg	agcttctctg	4260
aataagagga	aagtggtaac	atttcacaaa	aagtactctc	acaggatttg	cagaatgcct	4320
atgagacagt	gttatgaaaa	aggaaaaaaa	agaacagtgt	agaaaaattg	aatacttgct	4380
gagtgcagat	aggtgaatgg	aaaatgttat	ggtcatctgc	atgaaaaagc	aaatcatagt	4440
gtgacagcat	taggatata	aaaagatata	gagaaggtat	acatgtatgg	tgtaggtggg	4500
gcatgtacaa	aaagatgaca	agtagaatcg	ggatttattc	taagaatag	cctgtaagggt	4560

gtccagaagc	cacattctag	tcttgagtct	gcctctacct	gctgtgtgcc	cttgagtaca	4620
cccttaacct	ccttgagctt	cagagagggga	taatcttttt	attttatttt	attttatttt	4680
gttttgtttt	gttttgtttt	gttttatgag	acagagtctc	actctgttgc	ccaggctgga	4740
gtgcagtggt	acaatcttgg	cttactgcat	cctccacctc	ctgagttcaa	gcgattctcc	4800
ttcctcagtc	tctgaatag	ctaggattac	aggtgcaccc	caccacaccc	agctaatttt	4860
tgtattttta	gtagagaagg	ggtttcgcca	tgttggccag	gctggttttg	aagtcctgac	4920
ctaaatgatt	catccacctc	ggcttcccaa	agtgtctgga	ttacaggcat	gagccaccac	4980
gcctggccca	gagagggatg	atcttttagaa	gctcgggatt	ctttcaagcc	ctttcctcct	5040
ctctgagctt	tctactctct	gatgtcaaag	catggttcct	ggcaggacca	cctcaccagg	5100
ctccctccct	cgctctctcc	gcagtgtctc	ttccaggacc	tggacctctg	ccctctggat	5160
ggcggcaccc	agctacgaat	ctccgaccac	cactacagca	agggtctcag	gcaggccgcg	5220
tcagttggtg	tggccatgga	caagctgagg	aagatgctgg	ttccctgccc	acagaccttc	5280
caggagaatg	acctgagcac	cttctttccc	ttcatctttg	aagaaggtag	ttagccaaga	5340
gcaggcagta	gatctccact	tgtgtcctct	tggaaagtc	caagccccag	ccaactcaat	5400
tccccagag	ccaaagccct	ttaaaggtag	aaggccagc	ggggagacaa	aacaaagaag	5460
gctggaacc	aaagcaatca	tctctttagt	ggaactatt	cttaaagaag	atcttgatgg	5520
ctactgacat	ttgcaactcc	ctcactcttt	ctcaggggcc	tttcacttac	attgtcacca	5580
gaggttcgta	acctccctgt	gggctagtgt	tatgaccatc	accattttac	ctaagtagct	5640
ctgttgctcg	gccacagtga	gcagtaatag	acctgaagct	ggaacccatg	tctaatagtg	5700
tcaggtccag	tgttcttagc	cacccactc	ccagcttcat	ccctactggg	gttgtcatca	5760
gactttgacc	gtatatgtct	aggtgtcctc	caagaaatca	aattttgcca	cctcgctca	5820
cgaggcctgc	ccttctgatt	ttatacctaa	acaacatgtg	ctccacattt	cagaacctat	5880
cttcttcgac	acatgggata	acgaggctta	tgtgcacgat	gcacctgtac	gatcactgaa	5940
ctgcacgctc	cgggactcac	agcaaaaaag	cttggtgatg	tctggtccat	atgaactgaa	6000
agctctccac	ctccagggac	aggatatgga	gcaacaaggt	aaatggaaac	atcctggttt	6060
ccctgcctgg	cctcctggca	gcttgcta	tctccatggt	ttaaacaag	tagaaagtta	6120
atttaaggca	aatgatcaac	acaagtga	aaaaatatta	aaaaggaata	tacaaacttt	6180
ggtcctagaa	atggcacatt	tgattgca	ggccagtga	tttggttaaca	ggagtgtgac	6240
cctgagaaat	tagacggctc	aagcactccc	aggaccatgt	ccaccaagt	ctcttgggca	6300
tagtgacgtg	tcaattcttc	cacaatatgg	ggtcatttga	tggacatggc	ctaactgcct	6360
gtgggttctc	tcttctgtgt	gttgaggctg	aaacaagagt	gctggagcga	taatgtgtcc	6420
atccccctcc	ccagtcttcc	ccccttgccc	caacatccgt	cccacccaat	gccagggtgt	6480
tccttgtagg	gaaattttac	cgcccagcag	gaacttatat	ctctccgctg	taacgggcaa	6540
aagtttcaag	tgcggtgaac	ccatcattag	ctgtggtgat	ctgctggca	tcgtgccaca	6600
gtagccaaag	cctctgcaca	ggagtgtggg	caactaaggc	tgctgacttt	gaaggacagc	6660
ctcactcagg	gggaagctat	ttgctctcag	ccaggccaag	aaaatcctgt	ttctttggaa	6720
tcgggtagta	agagtgatec	cagggcctcc	aattgacact	gctgtgactg	aggaagatca	6780
aaatgagtg	ctctcttttg	agccactttc	ccagctcagc	ctctcctctc	ccagtttctt	6840
cccattgggtc	actctctgtt	cctgaaacag	ttctggtgcc	tgattttctg	cagaagtaca	6900
gcttcacctc	tttcttttcc	ttccacattg	atcaagttgt	tccgctcctg	tggatgggca	6960
cattgccagc	cagtgcacac	atggcttctc	tcttctcttc	cttcagcatt	taaaatgtag	7020
accctctttc	attctccgtt	cctactgcct	tgaggtctg	agaaacctc	aggcctttga	7080
ggggaaaccc	taaatcaaca	aaatgacctc	gctattgtct	gtgagaagtc	aagttatcct	7140
gtgtcttagg	ccaaggaacc	tactgtggg	ttccacaga	ggctaccaat	tacatgtatc	7200
ctactctcgg	ggctaggggt	tggggtgacc	ctgcatgctg	tgtccctaac	cacaagaccc	7260
ccttctttct	tcagtggtgt	tctccatgtc	ctttgtacaa	ggagaagaaa	gtaatgacaa	7320
aatacctgtg	gccttggggc	tcaaggaaaa	gaatctgtac	ctgtcctgcg	tgttgaaaga	7380
tgataagccc	actctacagc	tggaggtaag	tgaatgctat	ggaatgaagc	ccttctcagc	7440
ctcctgctac	cacttattcc	cagacaattc	accttctccc	cgcccccatc	cctaggaaaa	7500
gctgggaaca	ggtctatttg	acaagttttg	cattaatgta	aataaattta	acataatttt	7560
taactgcgtg	caaccttcaa	tcctgctgca	gaaaattaaa	tcattttgcc	gatgttatta	7620
tgtcctacca	tagttacaac	cccaacagat	tatatattgt	tagggctgct	ctcatttgat	7680
agacaccttg	ggaaatagat	gacttaagg	gtcccattat	caggtccact	ccactcccaa	7740
aatcaccacc	actatcacct	ccagctttct	cagcaaaagc	ttcattttcca	agttgatgtc	7800
attctaggac	cataaggaaa	aatacaataa	aaagcccctg	gaaactaggt	acttcaagaa	7860
gctctagctt	aattttcacc	cccccaaaaa	aaaaaaattc	tcacctacat	tatgctcctc	7920
agcatttggc	actaagtttt	agaaaagaag	aagggtctct	ttaataatca	cacagaaagt	7980
tgggggcccc	gttacaaetc	aggagtctg	ctcctgatca	tgtgacctgc	tcgtcagttt	8040
cctttctggc	caacccaaag	aacatctttc	ctataggcat	ctttgtccct	tgccccacaa	8100
aaattcttct	ttctctttcg	ctgcagagtg	tagatcccaa	aaattaccca	aagaagaaga	8160
tggaaaagcg	atttgtcttc	aacaagatag	aatcaataa	caagctggaa	tttgagtctg	8220

cccagttccc	caactggtac	atcagcacct	ctcaagcaga	aaacatgccc	gtcttcctgg	8280
gagggacca	aggcggccag	gatataactg	acttcaccat	gcaatttgtg	tcttcctaaa	8340
gagagctgta	cccagagagt	cctgtgctga	atgtggactc	aatccctagg	gctggcagaa	8400
agggaaacaga	aagggttttg	agtacggcta	tagcctggac	tttcctgttg	tctacaccaa	8460
tgcccaactg	cctgccttag	ggtagtgcta	agaggatctc	ctgtccatca	gccaggacag	8520
tcagctctct	cctttcaggg	ccaatcccca	gcccttttgt	tgagccaggc	ctctctcacc	8580
tctcctactc	acttaaagcc	cgctgacag	aaaccacggc	cacatttggg	tctaagaaac	8640
cctctgtcat	tcgctcccac	attctgatga	gcaaccgctt	ccctatttat	ttattttatt	8700
gtttgtttgt	tttgattcat	tggctctaatt	tattcaaaag	gggcaagaag	tagcagtgtc	8760
tgtaaaagag	cctagttttt	aatagctatg	gaatcaatc	aatttggact	ggtgtgctct	8820
ctttaaatca	agtcctttta	ttaagactga	aaatatataa	gctcagatta	tttaaagtgg	8880
aatatattata	aatgagcaaa	tatcatactg	ttcaatgggt	ctgaaataaa	cttcactgaa	8940
gaaaaaaaaa	aaaggggtctc	tcctgatcat	tgactgtctg	gattgacact	gacagtaagc	9000
aaacaggctg	tgagagttct	tgggactaag	cccactcctc	attgctgagt	gctgcaagta	9060
cctagaaata	tccttggcca	ccgaagacta	tcctcctcac	ccatcccctt	tatttcgttg	9120
ttcaacagaa	ggatattcag	tgcacatctg	gaacaggatc	agctgaagca	ctgcaggagg	9180
tcaggactgg	tagtaacagc	taccatgatt	tatctatcaa	tgcaccaaac	atctgttgag	9240
caagcgctat	gtactaggag	ctgggagtag	agagatgaga	acagtcacaa	gtccctcctc	9300
agataggaga	ggcagctagt	tataagcaga	acaaggtaac	atgacaagta	gagtaagata	9360
gaagaacgaa	gaggagtagc	caggaaggag	ggaggagaac	gacataagaa	tcaagcctaa	9420
agggataaac	agaagatttc	cacacatggg	ctggggccaat	tgggtgtcgg	ttacgcctgt	9480
aatcccagca	ctttgggtgg	caggggcaga	aagatcgctt	gagcccagga	gttcaagacc	9540
agcctgggca	acatagttag	actccatctc	ctacaaaaaa	taaataaata	aataaaacaa	9600
tcagccaggc	atgctggcat	gcacctgtag	tcctagctac	ttgggaagct	gacactggag	9660
gattgcttga	gcccagaagt	tcaagactgc	agttagctta	tccgttgacc	tgcaggtcga	9720
c						9721

<210> 10

<211> 1684

<212> DNA

<213> Homo sapiens

<220>

<223> interleukin 1 receptor antagonist (IL-1RA, IRAP)

<400> 10

ccgacagaat	ggaaatctgc	agaggcctcc	gcagtcacct	aatcactctc	ctcctcttcc	60
tgttccattc	agagacgato	tgccgaccct	ctgggagaaa	atccagcaag	atgcaagcct	120
tcagaatctg	ggatgttaac	cagaagacct	tctatctgag	gaacaaccaa	ctagttgctg	180
gatacttgca	aggaccaa	gtcaatttag	aagaaaagat	agatgtggta	cccattgagc	240
ctcatgctct	gttcttggga	atccatggag	ggaagatgtg	cctgtcctgt	gtcaagtctg	300
gtgatgagac	cagactccag	ctggaggcag	ttaacatcac	tgacctgagc	gagaaacagaa	360
agcaggacaa	gcgcttcgcc	ttcatccgct	cagacagtgg	ccccaccacc	agttttgagt	420
ctgccgcctg	ccccggttgg	ttcctctgca	cagcgatgga	agctgaccag	cccgtcagcc	480
tcaccaatat	gcctgacgaa	ggcgatcatg	tcaccaaatt	ctacttccag	gaggacgagt	540
agtactgccc	aggcctgcct	gttcccattc	ttgcatggca	aggactgcag	ggactgccag	600
tccccctgcc	ccagggtctc	cggetatggg	ggcactgagg	accagccatt	gaggggtgga	660
ccctcagaag	gcgtcacaa	aacctgggtc	caggactctg	cctcctcttc	aactgaccag	720
cctccatgct	gcctccagaa	tggctcttct	aatgtgtgaa	tcagagcaca	gcagcccctg	780
cacaaagccc	ttccatgtcg	cctctgcatt	caggatcaaa	ccccgaccac	ctgcccacac	840
tgtctcctct	tgccactgcc	tcttctctcc	tcattccacc	ttcccatgcc	ctggatccat	900
caggccactt	gatgaccccc	aaccaagtgg	ctccacacac	ctgtttttaca	aaaaagaaaa	960
gaccagtcca	tgaggagggt	ttttaagggt	ttgtggaaaa	tgaaaattag	gatttcatga	1020
tttttttttt	tcagtccccg	tgaaggagag	cccttcattt	ggagattatg	ttctttcggg	1080
gagaggctga	ggacttaaaa	tattcctgca	tttgtgaaat	gatggtgaaa	gtaagtggta	1140
gcttttccct	tctttttctt	ctttttttgt	gatgtcccaa	cttgtaaaaa	ttaaaagtta	1200
tggtagctatg	ttagccccc	taattttttt	tttcctttta	aaacacttcc	ataatctgga	1260
ctcctctgtc	caggcactgc	tgcccagcct	ccaagctcca	tctccactcc	agatttttta	1320
cagctgcctg	cagtacttta	cctcctatca	gaagtttctc	agctcccaag	gctctgagca	1380
aatgtggctc	ctgggggttc	tttcttctct	tgctgaagga	ataaattgct	ccttgacatt	1440
gtagagcttc	tggcacttgg	agacttgtat	gaaagatggc	tgtgcctctg	cctgtctccc	1500

```

ccaccaggct gggagctctg cagagcagga aacatgactc gtatatgtct cagggtccctg 1560
cagggccaag cacctacctt cgctcttggc aggtactcag cgaatgaatg ctgtatatgt 1620
tgggtgcaaa gttccctact tcctgtgact tcagctctgt tttacaataa aatcttataa 1680
tgcc
1684

```

```

<210> 11
<211> 1098
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> interleukin-6 (IL-6) precursor; B-cell stimulatory
      factor 2 (BSF-2); hybridoma growth factor; CTL
      differentiation factor (CDF); interferon beta 2
      (IFNB2)

```

```

<400> 11
gagaagctct atctcccctc caggagccca gctatgaact ccttctccac aagcgccttc 60
ggtccagttg ccttctccct ggggctgctc ctggtgttgc ctgctgcctt ccctgcccc 120
gtacccccag gagaagattc caaagatgta gccgccccac acagacagcc actcacctct 180
tcagaacgaa ttgacaaaca aattcggtag atcctcgacg gcatctcagc cctgagaaa 240
gagacatgta acaagagtaa catgtgtgaa agcagcaaaag aggcaactggc agaaaacaac 300
ctgaaccttc caaagatggc tgaaaaagat ggatgcttcc aatctggatt caatgaggag 360
acttgcttgg tgaaaatcat cactggctct ttggagtttg aggtatacct agagtacctc 420
cagaacagat ttgagagtag tgaggaacaa gccagagctg tgcagatgag taaaaagtc 480
ctgatccagt tcctgcagaa aaaggcaaag aatctagatg caataaccac ccctgaccca 540
accacaaatg ccagcctgct gacgaagctg caggcacaga accagtggct gcaggacatg 600
acaactcatc tcattctgcg cagctttaa ggttccctgc agtccagcct gagggctctt 660
cggcaaatgt agcatgggca cctcagattg ttgttggtta tgggcattcc ttcttctggt 720
cagaaacttg tccactgggc acagaactta tgttgttctc tatggagaaac taaaagtatg 780
agcgttagga cactatttta attattttta atttattaat atttaaatat gtgaagctga 840
gttaatttat gtaagtcata tttataattt aagaagtacc acttgaaaca ttttatgtat 900
tagttttgaa ataataatgg aaagtggcta tgcagtttga atatcctttg ttcagagacc 960
agatcatttc ttggaaagtg taggcttacc tcaaataaat ggctaactta tacatatttt 1020
taaagaaata tttatattgt atttatataa tgtataaatg gttttttata caataaatgg 1080
cattttataa aattcagc
1098

```

```

<210> 12
<211> 1077
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> growth hormone variant 1 (GH1) and growth hormone
      variant 2 (GH2); hGH-V, hGH-V2

```

```

<400> 12
aggatcccaa ggcccaactc cccgaaccac tcagggtcct gtggacagct cactagcggc 60
aatggctgca ggctcccga cgctccctgct cctggctttt ggctgctctt gcctgtcctg 120
gcttcaagag ggcaagtgcct tcccaacat tccttatcc aggcctttttg acaacgctat 180
gctccgcgcc cgctgcctgt accagctggc atatgacacc tatcaggagt ttgaagaagc 240
ctatatcctg aaggagcaga agtattcatt cctgcagaac cccagacct ccctctgctt 300
ctcagagtct attccaacac cttccaacag ggtgaaaacg cagcagaaat ctaacctaga 360
gctgctccgc atctccctgc tgctcactca gtcattggct gagcccgctg agctcctcag 420
gagcgtcttc gccaacagcc tgggtgatgg cgcctcggac agcaacgtct atcgccacct 480
gaaggacctg gaggaaggca tccaaacgct gatgtgggtg aggggtggac cagggatccc 540
caatcctggg gccccactgg cttccaggga ctggggagag aaacactgct gccctctttt 600
tagcagtcag gcgctgacct aagagaactc accgtattct tcatttcccc tcgtgaatcc 660
tccaggcctt tctctacaac ctggagggga gggaggaaaa tggatgaatg agagagggag 720
ggaacagtgc ccaagcgctt ggctctcctt tctctcctt cactttgcag aggcgtggaag 780
atggcagccc ccggactggg cagatcttca atcagtccta cagcaagttt gacacaaaat 840

```

cgcacaacga	tgacgcactg	ctcaagaact	acgggctgct	ctactgcttc	aggaaggaca	900
tggacaaggt	cgagacattc	ctgcgcacgc	tgcagtgccg	ctctgtggag	ggcagctgtg	960
gcttctagct	gcccgggtgg	catccctgtg	acccctcccc	agtgcctctc	ctggctgtgg	1020
aaggtgctac	tccagtgcc	accagccttg	tcctaataaa	attaagttgc	atcattt	1077

<210> 13
 <211> 2376
 <212> DNA
 <213> Homo sapiens

<220>
 <223> hepatoma-derived growth factor (HDGF);
 high-mobility group protein 1-like 2 (HMG-1L2)

<400> 13						
gaggaggagt	ggggaccggg	cggggggtgg	aggaagaggg	ctcgcgcaga	ggagggagca	60
attgaatttc	aaacacaaac	aactcgacga	gcgcgcaccc	accgcgccgg	agccttgccc	120
cgatccgcgc	ccgccccgtc	cgtgcggcgc	gcggggcgag	acgccgtggc	cgcgccggag	180
ctcggggccg	ggggccaccat	cgaggcgggg	gccgcgcgag	ggccggagcg	gagcggcgcc	240
gccaccgccg	cacgcgcaaa	cttgggctcg	cgcttccccg	cccggcgcg	agcccggggc	300
gcccggagcc	ccgccatgtc	gcgatccaac	cggcagaagg	agtacaaatg	cggggacctg	360
gtgttcgcca	agatgaagg	ctaccacac	tggccggccc	ggattgacga	gatgcctgag	420
gctgcccgtga	aatcaacagc	caacaaatac	caagtctttt	ttttcgggac	ccacgagacg	480
gcattccctg	gccccaaaga	cctcttccct	tacgaggaat	ccaaggagaa	gtttggcaag	540
cccaacaaga	ggaaagggtt	cagcgagggg	ctgtgggaga	tcgagaacaa	ccctactgtc	600
aaggcttccg	gctatcagtc	ctcccagaaa	aagagctgtg	tggaagagcc	tgaaccagag	660
cccgaagctg	cagaggggtga	cggtgataag	aaggggaatg	cagagggcag	cagcgacgag	720
gaagggaagc	tggtcattga	tgagccagcc	aaggagaaga	acgagaaagg	agcgttgaag	780
aggagagcag	gggacttgct	ggaggactct	cctaaacgtc	ccaaggaggc	agaaaaccct	840
gaaggagagg	agaaggaggc	agccaccttg	gaggttgaga	ggcccccttc	tatggagggtg	900
gaaaagaata	gcacccccctc	tgagcccggc	tctggccggg	ggcctcccca	agaggaagaa	960
gaagaggagg	atgaagagga	agaggctacc	aaggaagatg	ctgaggcccc	aggcatcaga	1020
gatcatgaga	gcctgtagcc	accaatgttt	caagaggagc	ccccaccctg	ttcctgctgc	1080
tgtctgggtg	ctactgggga	aactggccat	ggcctgcaaa	ctgggaacct	ctttcccacc	1140
ccaacctgct	ctcctcttct	actcactttt	cccactccaa	gccagcccca	tggagattga	1200
cctggatggg	gcaggccacc	tggctctcac	ctctaggtcc	ccatactcct	atgatctgag	1260
tcagagccat	gtcttctccc	tggaatgagt	tgaggccact	gtgttccctc	cgcttgagac	1320
tattttccag	gcttctgctg	gggcctggga	caactgctcc	cacctcctga	cacccttctc	1380
ccactctcct	aggcattctg	gacctctggg	ttgggatcag	gggtaggaat	ggaaggatgg	1440
agcatcaaca	gcagggtggg	cttgtggggc	ctgggagggg	caatcctcaa	atgcgggggtg	1500
ggggcagcac	aggagggcgg	cctccttctg	agctcctgtc	ccctgtctca	cctattatcc	1560
cagctgccta	gattcagggg	aagtgggaca	gcttgtaggg	gaggggctcc	tttccataaa	1620
tccttgatga	ttgacaacac	ccatttttcc	ttttgccgac	cccaagagtt	ttgggagttg	1680
tagttaatca	tcaagagaat	ttggggcttc	caagtgtgtc	gggccaaagga	cctgagacct	1740
gaagggttga	ctttacccat	ttgggtggga	gtgttgagca	tctgtccccc	tttagatctc	1800
tgaagccaca	aataggatgc	ttgggaagac	tcctagctgt	cctttttcct	ctccacacag	1860
tgctcaaggc	cagcttatag	tcatatatat	caccagaca	taaaggaaaa	gacacatttt	1920
ttaggaaatg	tttttaataa	aagaaaatta	caaaaaaaaa	ttttaagagac	ccctaaccct	1980
ttgtgtgctc	tccattctgc	tccttcccc	tcgttgcccc	cattttctgag	gtgcaactggg	2040
aggctcccct	tctatttggg	gcttgatgac	tttctttttg	tagctggggc	tttgatgttc	2100
cttccagtg	catttctcat	ccacataccc	tgacctggcc	ccctcagtg	tgtcaccaga	2160
tctgatttgt	aaccactga	gaggacagag	agaaataagt	gccctctccc	accctcttcc	2220
tactggtctc	tctatgcctc	tctacagtct	cgtctctttt	accctggccc	ctctcccttg	2280
ggctctgatg	aaaaattgct	gactgtagct	ttggaagttt	agctctgaga	accgtagatg	2340
atttcagttc	taggaaaata	aaaccctgtg	attact			2376

<210> 14
 <211> 2111
 <212> DNA
 <213> Homo sapiens

<220>

<223> tumor necrosis factor (TNF) receptor superfamily, member 1A
(TNFRSF1A); tumor necrosis factor (TNF) receptor 1 (55kD)
(TNFR1, TNF-R55, p55-R); CD120a; TNFAR; TNFR60

<400> 14

```
gaattcgggg ggggttcaaga tcaactgggac caggccgtga tctctatgcc cgagtctcaa 60
ccctcaactg tcacccaag gcacttggga cgtcctggac agaccgagtc ccgggaagcc 120
ccagcaactg cgctgccaca ctgccctgag cccaaatggg ggagtggag gccatagctg 180
tctggcatgg gcctctccac cgtgcctgac ctgctgctgc cgctgggtgct cctggagctg 240
ttggtgggaa tatacccctc aggggttatt ggactgggtcc ctacacctagg ggacagggag 300
aagagagata gtgtgtgtcc ccaaggaaaa tatatccacc ctcaaaataa ttcgatttgc 360
tgtaccaagt gccacaaagg aacctacttg tacaatgact gtccaggccc ggggcaggat 420
acggactgca gggagtgtga gagcggtcc ttaccgctt cagaaaacca cctcagacac 480
tgcctcagct gctccaaatg ccgaaaggaa atgggtcagg tggagatctc ttcttgca 540
gtggaccggg acaccgtgtg tggctgcagg aagaaccagt accggcatta ttggagtga 600
aaccttttcc agtgcttcaa ttgcagcctc tgctcaatg ggaccgtgca cctctcctgc 660
caggagaaac agaaccctgt gtgcacctgc catgcagggt tcttttctaag agaaaacgag 720
tgtgtctcct gtagtaactg taagaaaagc ctggagtgc cgaagttgtg cctacccag 780
attgagaatg ttaagggcac tgaggactca ggcaccacag tgctgttgcc cctgggtcatt 840
ttctttggtc tttgcctttt atccctcctc ttcatgtgtt taatgtatcg ctaccaacgg 900
tggaagtcca agctctactc cattgtttgt gggaaatcga cacctgaaaa agagggggag 960
cttgaaggaa ctactactaa gcccttgccc ccaaacccaa gcttcagtc cactccaggc 1020
ttcaccccca ccttgggctt cagtcctgtg ccagttcca ccttcacctc cagctccacc 1080
tatacccccg gtgactgtcc caactttgct gctcccgcga gagaggtggc accaccctat 1140
cagggggctg accccatcct tgcgacagcc ctgcctcctg accccatccc caacccctt 1200
cagaagtggg aggacagcgc ccacaagcca cagagcctag aactgatga cccgcgcagc 1260
ctgtacgccg tgggtggagaa cgtgcccccg ttgcgtgga aggaattcgt gcggcgccca 1320
gggctgagcg accacgagat cgatcggctg gagctgcaga acgggcgctg cctgcgcgag 1380
gcgcaataca gcatgtgtgc gacctggagg cggcgcacgc cggcgcgca ggccacgctg 1440
gagctgtgg gagcgtgtgc ccgcgacatg gacctgtgtg gctgcctgga ggacatcgag 1500
gaggcgctt gcggccccgc cgccctccc cccgcgccc gtcttctcag atgaggctgc 1560
gccctgctg ggactctaa ggaccgtcct cgagatcgc cttccaacct cacttttttc 1620
tggaaggag gggctctgca ggggcaagca ggagtagca gccgcctact tgggtgtaac 1680
ccctcgatgt acatagcttt tctcagctgc ctgcgcgcgc ccgacagtca gcgctgtgcg 1740
cgcggagaga ggtgcgccgt gggctcaaga gcctgagtgg gtggtttgcg aggatgaggg 1800
acgctatgcc tcatgcccg tttgggtgtc ctaccagca aggtgtctcg ggggccctg 1860
gttcgtccct gagccttttt cacagtgcac aagcagtttt ttttgtttt gttttgttt 1920
gttttgttt taaatcaatc atgttacact aatagaaact tggcactcct gtgccctctg 1980
cctggacaag cacatagcaa gctgaactgt cctaaggcag gggcgagcac ggaacaatgg 2040
ggccttcagc tggagctgtg gacttttgta cataactaa aattctgaag ttaaaaaaaa 2100
aaccgaatt c 2111
```

<210> 15

<211> 534

<212> DNA

<213> Homo sapiens

<220>

<223> neutrophil lipocalin (HNL); lipocalin 2 (LCN2);
human neutrophil gelatinase-associated lipocalin
(Hngal, NGAL); oncogene 24p3; 25 kDa
alpha-2-microglobulin-related subunit of MMP-9

<400> 15

```
caggactcga cgtcggacct gatcccggcc ccacctctga gcaagggtccc tctgcagcag 60
aacttccagg acaaccaatt ccaggggaag tggatatgtg taggcctggc agggaaatgca 120
attctcagag aagacaaaga cccgcaaaag atgtatgcca ccatctatga gctgaaagaa 180
gacaagagct acaatgtcac ctccgtcctg tttaggaaaa agaagtgtga ctactggatc 240
aggacttttg ttccaggttg ccagcccggc gaggttcacgc tgggcaacat taagagttac 300
cctggattaa cgagttacct cgtccgagtg gtgagcacca actacaacca gcatgctatg 360
```


gtgtttcttca	agaaagtttc	tcaaaacagg	gagtacttca	agatcacgct	ctacgggaga	420
accaaggagc	tgacttcgga	actaaaggag	aacttcatcc	gcttctccaa	atctctgggc	480
ctccctgaaa	accacatcgt	cttccccgct	cccatcgatc	aatgcatcga	cggc	534

<210> 16
 <211> 5869
 <212> DNA
 <213> Homo sapiens

<220>
 <223> neutrophil lipocalin (HNL); lipocalin 2 (LCN2);
 human neutrophil gelatinase-associated lipocalin
 (Hngal, NGAL); oncogene 24p3; 25 kDa
 alpha-2-microglobulin-related subunit of MMP-9

<400> 16						
ctcgaggatc	tgggtcact	gcaacctccg	cctcccaggt	tcaagctggt	cttctgcctc	60
agcctcccga	gtagctggga	ttacaggcgc	ctgccaccat	gccctgctaa	tttttgtatt	120
tttagtagag	atgggggtttc	accgtgttgg	ccagactggg	ctcgaactcc	tgacctcgtg	180
atccacccgc	ctcagcctcc	caaatgctgg	gattacagat	gtgagccacc	gcacccggcc	240
tggcagagga	tacttttttaa	ggtcaaagac	agtagcagag	gtggagttcc	tgggaacagg	300
gtcatgaggg	gaagaggggg	ttcggagggg	gcgagtagcc	actggctacc	tctagaaagg	360
gaaggctttg	gtgcaacatc	gttcccctgc	agttttactc	atctttgctt	cctgcccttt	420
catcatccaa	tcgggcaggc	aggacagggc	ctgagggggc	agggatccag	tgggtgcctc	480
tctagactaa	ccccagctca	ggactcccag	agcccccttc	ctgaggccct	gctgccccca	540
agcccagatt	ggggatccca	agcagcacgt	aggcagagcc	agtgaggtcc	ccgttagtcc	600
cattgaaagc	tctaaaacca	gcgaaccctc	agtccagcct	caggtcaggc	atccaggacg	660
gcctcagccc	tcatgggtga	gccatctctg	cggacactgc	acagggccta	cgatccatcg	720
ctgcctcccc	aggatgccag	ccaggccccc	gttgagataa	ctgcttccct	gctggacaag	780
gctgggacca	gccatctcgg	tgacagttcc	agaacccctg	gcctgggctg	ctgggttcaa	840
tggaaaaagg	ctgtgactag	agtcaggggg	atggtctcag	tgacctcaag	gataaggcca	900
gatccttgca	ctgtcagtga	cccaaagcaa	caggtgtcca	gagcagcagt	gtggcgcctt	960
cacgccccca	cacatcagcc	caactcaccc	aggacaggga	ctgtagcctc	agcactcaac	1020
ccatgtgccc	tgtgtggggg	ctcttcccac	tgcactcaca	ggagagggaag	ggtccctcag	1080
gggtccactg	gggtcccctc	ctgcaaattg	ggcaaggaga	ggggcaaggg	gctgtctcaa	1140
ggcccctgga	gcacatgcag	gtcctggact	ggggctcctg	ggagggccat	gattctgggc	1200
tccatgagtt	cagagcagac	gccttgtttt	tccttgtcca	ctgtcagcca	ccccaccctt	1260
ccctgaccct	taaaagaacc	aggaaacagc	acatgatctg	ttggaaggag	gcattcatte	1320
tttcttttct	gtgggtgtgg	ggaggggacc	acagggcaca	tacccccacc	tgggatccag	1380
ctgagcaggg	gggtcagaga	tgacagctct	tccggctcac	aggccaccgg	cccacataca	1440
gggcaatcag	agaaaagaaa	cagcacaagg	aaggcacaga	gggagtcgtt	gtcccctgcca	1500
gaggtgcagc	aactcgggaa	tgtccctcac	tctcccgcgt	cctctgtctt	gccccactct	1560
gaccaggtgc	agaaatcttg	ccaagtgttt	ccgcaggagt	tgctggcaat	tgcctcacat	1620
tcctggcctt	ggcaaagaat	gaatcaaccc	accctagatc	ccataaatag	ggccaccacg	1680
gtgagcctct	cactcgccac	ctcctcttcc	acccttgcca	ggcccagcag	ccaccacagc	1740
gcctgcttcc	tcggccctga	aatcatgcc	ctaggtctcc	tgtggctggg	cctagccctg	1800
ttgggggctc	tgcatgccc	ggcccaggac	tccacctcag	acctgatccc	agccccacct	1860
ctgagcaagg	tccctctgca	gcagaacttc	caggacaacc	aagtaagggg	ccaagagggg	1920
cacctgcagg	cagggcctgg	ggaagagtgg	gagcagaggg	gaggagaggt	gaagagactc	1980
aggaagagcg	ttgggcagga	cttaggagtc	cagggctccag	gtttcagctc	actctgtgcc	2040
accagggctc	cctgggtgaa	accatgcccc	ttcccccat	ccccacccc	tctcagcctg	2100
aacagactcc	cccaggtcca	catccccctc	cccataaccc	ccattgtcca	aagaaggtgg	2160
gagcactttt	agtccccctg	cacagatgag	gaaactgagg	ctcaggaagg	cccaccagcc	2220
acatgcctcc	tccagtggag	aggtcaccct	cctccctgcc	agactcagaa	ccgcctcttc	2280
ccccaggact	cccttctgga	ctgatggcct	cctgctcctg	ccccttcacc	agtgcaggcc	2340
cagcctgggc	cctgctgccc	agctagaggg	gctcatgggt	ccaagctggg	cggcccagag	2400
gtgccacagg	gacagagctg	gaggggtggc	tcctagggcc	attcctgggt	tgtgcctctt	2460
atcagtccct	tgcagttcca	ggggaagtgg	tatgtggtag	gcctggcagg	gaatgcaatt	2520
ctcagagaag	acaaagaccc	gcaaaagatg	tatgccacca	tctatgagct	gaaagaagac	2580
aagagctaca	atgtcacctc	cgtcctgttt	aggtgagggc	cgacatctcc	tgggggtgtg	2640
agagtcagac	tgacgtcaca	ggcaagggat	ggccaaagct	gagggatcct	gtcgttcacc	2700

tcgctgttct	gcccgaatt	catctgtgtt	catccttct	ctgttcctta	gagcaacgtt	2760
tatagcacat	ttccatgcag	acacacagac	agtgggtggg	atggacatgc	acagtcgtta	2820
gaaaacaaga	cggagagagg	aggggtgcct	gggagcggga	ggaggggaca	ctggatccag	2880
ccttgaacct	cacccagtgc	cttcatggaa	ggcttccagg	gaggtggcct	taaaagagcc	2940
aacctgcttc	aaaaggaaat	gtggggtgtt	cccggcaggg	gctggagtca	gagagagccc	3000
ccccttcagg	aaggagcaag	ccatcgcagg	gtcacccctga	gcagagctgc	tgagcagcct	3060
ggaggggcag	gtggccacgc	tagcacctag	cacggctctc	aggccccgcc	ccagcggatc	3120
tgctgcgagg	tggcttagag	cagggctctt	gggccgcagg	gtggggagac	ttgggtgggt	3180
gcagcctagg	gggtcgggag	accagcgaaa	gtgaagcggg	gccgtcacag	gtgtgagaga	3240
acaggcgag	ggtgaagagg	cagggagcca	gggatcagcc	gccccagtg	ggtttctgac	3300
tctggcagct	gagtggattg	ggattggggc	atttgtggag	caaggagcag	aatacagaca	3360
ggttggggag	ctcagccctg	gggtgccagg	ggatgggaag	tgggaggact	caaggatggg	3420
gtcaggtttg	acccgagagc	taggggaacg	gctggcatgg	agcagactgg	aagtaccgag	3480
gtggatcccc	gggagagggt	ataggaaagg	aagcagcaag	ctgagtgcag	gggagaaatg	3540
cagggtttcc	tgtgtgttgg	gtggcggcgg	gggtgaaagc	caccagggga	ggcagccaaa	3600
ggaaagaagg	acatcgggtg	ctggagggtc	tgagtggggt	ccagggggcc	caggcaggcc	3660
aggagggaca	gcctgggtgc	agctcaggga	gaaggcccag	gcccattctg	gctgggtggg	3720
gtagggcccc	tccaggtagt	gggggatgag	ctgtcacggg	ttgggccgga	ctgagagcaa	3780
cagaaccttg	ctgctgccct	ggccccacct	tgtccagcac	aggaggccca	agcctgggtt	3840
gtctccccct	tcacccaccc	atctctccct	cccaaggaaa	aagaagtgtg	actactggat	3900
caggactttt	gttccaggtt	gccagcccgg	cgagttcacg	ctgggcaaca	ttaagagtga	3960
gtcttgagtg	aggtggggca	ctgagttggg	gctccgggga	gctgggtagg	ggcacagacc	4020
ttcctgcccc	tccacacaga	tgtgttgtat	ggggagaagc	ccacgttgat	gggtctggga	4080
gggaggggac	agctccctcc	tcccatccag	ggcagggctg	acccctcacc	gtccacgcct	4140
gcaggttaac	ctggattaac	gagttacctc	gtccgagtgg	tgagcaccaa	ctacaaccag	4200
catgctatgg	tgttcttcaa	gaaagtttct	caaaacaggg	agtacttcaa	gatcacccctc	4260
tacgggtggg	cctctcccat	cccctcgggg	actggctcct	gatcacactt	agtgggaggg	4320
gaggccggtc	ccccatgagg	aagggatctg	aggcctcatc	tactcattca	acgatattta	4380
tgtggtgtct	gccggccact	cactggccat	cttgggtcaca	gggagaacca	aggagctgac	4440
ttcggaaacta	aaggagaact	tcatecgctt	ctccaaatat	ctgggcctcc	ctgaaaacca	4500
catcgtcttc	cctgtcccaa	tcggtaattg	ccagtcgtga	tgaggggacg	gggacatggg	4560
gactgttcag	gcaggatgct	tccctaccag	ggatcagggg	gaggagggac	tccgtcctca	4620
gcttcagtc	ctggagcagt	ggatgggtcca	ggagctcctt	ggaagccact	ctggggccag	4680
gaagactgtg	ccccacccca	gggtctatgg	gactcccagg	gacccaggcc	gcaagtgtctc	4740
tttcttgcca	gttttagccc	ggtctgcccc	gacaaggatt	tcaggcccag	gcctgagtat	4800
ccattttctca	gtctcactgg	cctgacacct	ctggccaccc	tcccaggccc	ccttgttctg	4860
ggccatctcc	cccgaccctc	ccaggcctcg	tcacccctgg	ttttgctgtc	ctggctgtcc	4920
tctctccccct	ggggacttgc	tcaccactga	cttgggagct	gtccttgact	ccagggagcc	4980
tggcttgggc	aggaggtccc	agccaggcca	ttcagagagc	cactggcctc	ccccaggctg	5040
agagactgcc	tggactggta	aacaggcagg	agacctgggt	gcccaggagg	cctgggagct	5100
ggccctcact	cagggcagcc	cctccccagg	cctttctccc	acatcccctg	cctgtccatc	5160
cacccctctg	ttgccccatc	tctgaaagga	acccccatat	cttctgcagc	tgggccagggt	5220
ggggcagggg	ctgcccaggg	gcagtgcaga	ggacctggca	gtcagggatc	acacacacac	5280
actcatacac	gcacacacac	acacagctgc	ctgttctgac	ggactttctc	cctaacagac	5340
cagtgtatcg	acggctgagt	gcacagttag	tgtggctggg	cggctgcgag	ggggcttgtg	5400
ggaggccagg	gtgcagtggg	ctgggggtct	tgggcctgcc	tttgctcatc	cccctgcccc	5460
ccagcactgc	tgtgtctttt	attctgctgt	ccccatctcg	ggtgcctccc	atttccccac	5520
ccatcacctc	catatccacc	tctgtccagg	gtgccgccag	ctgccgcacc	agcccgaaca	5580
ccattgaggg	agctggggaga	ccctccccac	agtgccaccc	atgcagctgc	tcccagggcc	5640
accccgtgta	tggagcccca	ccttgtctgc	taaataaaca	tgtgccctca	ggcctctgag	5700
tctacactgt	ttgacccctg	ggccttcgag	gaaggggagg	ggcgggaggc	tccactgggc	5760
atcactctca	gggtctgcac	ccccaggatg	gagcctagcg	aaaccagcct	gggtgttagg	5820
gctgcagagt	gaagacacaa	gcccctggtc	atcaccagca	gctttgtgg		5869

<210> 17

<211> 634

<212> DNA

<213> Homo sapiens

<220>
 <223> nitric oxide synthase (NOS2); inducible nitric
 oxide synthase (INOS)

<400> 17
 cacgttgctc tctgttttta cctaaaagag ccagaagcgc tatcacgaag atatctatgg 60
 tgctgtatctt ccttacgagg cgaagaagga cagggtggcg gtgcagccca gcagcctgga 120
 gatgtcagcg ctctgagggc ctacaggagg gggtatagct gccggcacag aacttaagga 180
 tggagccagc tctgcattat ctgaggtcac agggcctggg gagatggagg aaagtgatat 240
 cccccagcct caagtcttat ttccctcaacg ttgctcccca tcaagccctt tacttgacct 300
 cctaacaagt agcaccctgg attgatcgga gcctcctctc tcaaactggg gcctccctgg 360
 tcccttgagg acaaaatctt aaatgccagg cctggaagtg ggtgaaagat ggaacttgct 420
 gctgagtga ccaactcaag tgaccaccag gaggtggat cgccaccact tgtttttaac 480
 tgccttggtg acaaagattt atgcctcttg tttttaaaaa actaaaacca gtctgttccc 540
 catggccact ggggtcttccc catggccact tgggtcttcc ctgtatgatt ccttgatgga 600
 gatatttaca tgaatttgca tttttacttt aatc 634

<210> 18
 <211> 6004
 <212> DNA
 <213> Homo sapiens

<220>
 <223> mitochondrial superoxide dismutase (SOD2);
 manganese-containing superoxide dismutase
 (mangano-superoxide dismutase, MnSOD);
 indophenoloxidase B (IPO-B)

<220>
 <221> modified_base
 <222> (1)..(6004)
 <223> n = g, a, c or t

<400> 18
 aagcttggga aactgggcaa ctttttcttt atttttgttt ttattttatta ttatttttga 60
 gatggagttt agctctttcg cccagggcta cagtgaagtg gcttgatctt ggccctactg 120
 cagcctctgc ccatcccggg tcaagtgatt ctctgccctc agcctccoga gtagctggga 180
 ttataggtgc ctgccacatg cccggctaatt ttttttgtat ttttagtaga gaggagtttc 240
 tccatgttgg tcaggctggg tttgaactcc tgacctcagg tgatccacct gtcttggcct 300
 cccaaagtac taagattaca ggtgtgagcc accgtgcctg gccaaacttat tttttttctg 360
 agttcagttc tctagactat cgggttaatac ttttgaagtt ttgtcagtta ccagaataac 420
 agatatattc atatgcaacc agtggttttg gtatgctgcc attttggttaa tctgtaccac 480
 attccacatt tgtgcttata aggatgcata tcctatttta aaccgtaga ataagagaag 540
 tgagattttg acccagttga tttagttgat gtgactaatc tagaattata ttctgtatta 600
 ctacagaata aaaggattac agctccttaa agtataccct tagttcagtc gtagagaaaa 660
 ctgcccataca agacaggaag agctgggctg ccttgagaga gaacaatgac tttattccca 720
 aatggaggcg tagaagaagg agggtagaag tcaaaggaaa tttctattca gggaaaagaa 780
 aaagctaaca gaaagatgta tttttctttc cttaacaaga tagtaaactg gagagtggga 840
 atcctctaata tctattcagg gaaaagaaaa agctaacaga gaaagtagta tttctttcct 900
 aacaaagata gtacagttag tggggaaatc cctctaacac gattcattaa aaaatgtgaa 960
 ctacgcagct ggaggccatt atcctaagcg aattaaccca ggaacagaaa accaaatagc 1020
 ccacatgtct cacttgcaag tggaagctaa acatggagta cttatggata taaaaatggc 1080
 agcaacagac actgaggaca gagcgggagg gagaagaggg ggggtgaaac tgttgtatac 1140
 atgctcgcta ccttggtgat ggctacaatt gcaccagacc tcagctacat atgaaccgtg 1200
 tacaactgtg ctgtaccttg attaataatt gaccggccan nnnnnnnnnn nnnnnnnnnn 1260
 nnnnnnnnnn nnnnnnnnnn aaatccgctg ctcgggagct aggcaggaga aatgctgacc 1320
 tgggagggga gaggttgca gtagcccgaga tcatggcatt gcaactccgc cctggggcca 1380
 ccaagagtga aactccgtct tcaaaagggc aaaaaaacga aaaaaaaaaa aaaaaaaaaa 1440
 aaaaaaaagt tgaagttata aaaaacaaaa acgtgaatta aaattgtgaa acttagatcc 1500
 aggtgtcgca ttctgatgtt gtctaatttc ttgggccta tgacaaatat attttaatac 1560
 atgtaataata acatgttact gataattatt gaaactctgt tcatttgtgg gtgtttttta 1620

ggattttttt	ttttaaatag	gggagttgct	ggaagccatc	aaacgtgact	ttgggttcctt	1680
tgacaagttt	aaggagaagc	tgacggctgc	atctgtttgt	gtccaaggct	caggttgggg	1740
ttggcttgg	ttcaataagg	aacggggaca	cttacaatt	gctgcttgc	caaatcagga	1800
tccactgcaa	ggaacaacag	gttagattta	aaaattgtga	tttcatttgg	gagagatgct	1860
ctactgtaaa	gcattcaact	agaaataagg	aaaactaaca	gtgttttaag	aacatgtaat	1920
aatttgcaaa	tcttaacaga	taacacccag	agtcttgtgt	aagaaaaatg	ttttagaagt	1980
ctgatatttc	ataaaaattaa	gtacacgtaa	ttttataggt	acattaacaa	acatgtttat	2040
ttttatttat	tttttttgag	acagactcta	ctgttggccc	ccaggctgga	gtgcagtgg	2100
gcgatctcgg	nnnnnnnnnn	nnnnnnnnnn	nnnnngtta	attttcccag	tctattttat	2160
tgtagtatt	tgtcacattt	tctttgtaaa	cagtgaatta	aaatatttta	taggtattca	2220
ttcttatcta	gatttcctac	ttatataaaa	aaacaagtga	atgagattgt	tacaaaggg	2280
aattttgtgt	gagtagaata	ataaaaagttg	aaattgagaa	gatgcaatgt	tttagactga	2340
aactgtgggt	ggtttgtttt	ccccttcttt	ctaacaggcc	ttattccact	gctgggaatt	2400
gatgtgtggg	agcacgctta	ctaccttcag	tataaaaatg	tcaggcctga	ttatctaaaa	2460
gctatttggg	atgtaatcaa	ctgggagaat	gtaactgaaa	gatacatggc	ttgcaaaaag	2520
taaaccacga	tcgttatgct	gagtatgtta	agctgctctt	tatgactgtt	ttgtagtgg	2580
tatagagtac	tcgagaatac	agtaagctgc	tctattgtag	catttcttga	tggtgcttag	2640
tcacttattt	cataaaccaa	cttaatgttc	tgaataattt	cttactaaac	attttgttat	2700
tgggcaagt	attgaaaata	gtaaatgctt	tggtggattg	aatctgattg	ggacatttct	2760
tcagagagct	aaattacaat	tgcatttata	aaaccatcaa	aaatattcca	tccatatact	2820
tnthgggact	tgtagggatg	cctttctagt	cctattttat	gagttataga	aaatctagtc	2880
ttttgcccc	gttacttaaa	aataaaaat	taacactttc	ccaagggaaa	cactcggctt	2940
ttctatagaa	aattgcactt	tttgtcataa	tctctgcag	tgatacttct	ggtagatgtc	3000
accagtggt	ttttgttagg	tcaatgttcc	tgtatatagt	ttttgcaaat	agagctgtat	3060
actgtttaa	tgtagcagg	gaactgaact	gggttttgc	tcacctgcac	agtaaaaggca	3120
aacttcaaca	gcaaaactgc	aaaaaggtgg	tttttgcagt	aggagaaagg	aggatgttta	3180
tttgaggggc	gccaaagcaag	gagaattggg	cagctcatgc	ttgagcccaa	tctccatgat	3240
gcctacaagc	tagagtattt	aaaggcagtg	gtaaaatttca	ggaaagcaga	agttaaaggc	3300
aaaattgtaa	atcagtcgag	atcgggtgcc	ttcagggtgg	tatggctagt	ataccaaaat	3360
tgtaaatcac	tacatgaagc	ttatatattg	gtttggcctg	aaagggtgaag	tgggtaggca	3420
gggggcgggc	ttacaggtta	tggtggattc	aaagactccc	tgatttgtga	ttggttaagg	3480
aagcaagcct	tgtctaaaaa	cttggggctc	gcagaaagga	acattaagg	ctggccaggc	3540
ccctcaggaa	agaaactgag	agcaaaagaat	ggaggtcaga	tttagtccct	ggtgttcccc	3600
cttatctgac	gtctgtgtga	atccatttgg	tggtgtctg	ggtttctgaa	aagtgtctca	3660
ggggcacgtg	ttaaggatgt	ctctagggtga	ctctaacttc	cctggctatt	gtttgaaact	3720
gttatgacct	tcttgcttat	cagcttgctg	gtttccttct	cggggcgagc	tggtgacctg	3780
gagttttcgg	tgaaggaaac	tcaagattct	cctttatttc	tgtgcttgtg	ggaatcccc	3840
tgctcccaaa	gaggggtccc	tgactccgtc	tcacagggat	ctttttgtat	atttggctta	3900
gcatcataca	tttgccatgt	tgtttcatca	tcttgccctaa	tttactgttt	ttgaatattt	3960
catttgtttc	taattgttac	tacagataat	gctgggtgga	gcaactctgt	gtacataggt	4020
ttatctccta	ttggaatatt	ttctttatat	aggcggtttt	tttttttctt	tttttttgga	4080
gacagagctt	gctctgttgc	ccaggctgga	gtgcagggtg	ccgcgacctg	gagctccact	4140
gcaacctcca	cttcccgggt	ccaagtgtatg	tcaccaacctc	agcctcctga	atagctggga	4200
ttataggtgc	atgctaccat	gcctggctac	tttttgtatt	tttagcagag	acagggtttc	4260
accatgttgg	ccagggtgg	ctcgaactcc	tgacctcaag	tgatccgtct	ggctcagcct	4320
cccaaagtgc	tgggattaca	ggtgtgagcc	actgcacctg	gcctatatag	gcttttttct	4380
taaacctatt	tagtaatgtt	ttccaagttt	cccaaagttat	tttttatttt	aattttcccc	4440
agttattttt	ctattttttt	ttcatggaaa	aatggggtaa	cttagcagtt	tcaatatattga	4500
agactgaagt	ttaaaaaaat	ttaaattcaa	ggtactttta	aaattcagtt	agaaaagtag	4560
gctttaaaaa	ttattagaga	caagagtacc	aaagcggtgt	gtgtatgtgt	gtgtgtgtat	4620
gcatgcttgt	ggattggaaa	aactttggag	actgattact	tttcattata	tatgtgtcac	4680
agtgaacacg	cttttatgtg	tcagtgaaga	ttactgcttg	cctctctaag	gaaggtcgtg	4740
actgtttaaa	tagacgggca	aggtggaacc	ttttgaaaga	tgagcttttg	aatataagtt	4800
gtctgctaga	tcagtgtttg	tattgaacta	acaagggttg	cagatctgct	gacttatata	4860
aagctttttg	attcctacta	agcttttaaga	tttaaaaaat	gttcaatgtt	gaaattttctg	4920
tggggctcta	tttttgcttt	ggctttctgg	tgagagagtg	aggaagcatt	ctttccttca	4980
ctaagttttg	tctttcttgt	cttctggata	gattgaattt	taagagacta	agggaattta	5040
caaacataagg	aatttagtca	tctgggtgaa	aaggagactt	taagattgtt	agggctgggc	5100
ggggtgactc	acatctgtta	atcccctttg	ggcgcccaag	gcggcagaa	acttgaagga	5160
gttcaagacc	agcgtggcca	acgtggtgaa	accctgtctc	tactaaaaaa	tacaaaattg	5220
tttagctctg	tttttcataa	tagaaataga	aaaggtaaaa	ttgcttttct	tctgaaaaga	5280

```

acaagtattg ttcatccaag aagggttttt gtgactgaat cagcagtgcc tgcccatgtc 5340
atagctgtgc ttcaaaaacc tcagcatgat tagttgtttg gagcaaacia ggaagcaaag 5400
caatacgttt ttgaaattct atctgttgct tgactatatt gtaataatta acattgaagt 5460
tgagaaattc acaacttta ttgtacactt cattgcaact tgaaattcat ggtcttaaaag 5520
tgagatttga atttctattg agcgccttta aaaaagtaat accaaaccat aaagttaaaa 5580
tctatgtata ttgagtcata tctaaaacca cgtataaaca taaattgtat ttcctgtttt 5640
aattccaggg gaagtactgt ttgggaaagc tattattagg taaatgtttt acaaattact 5700
gtttctcact ttcagtcaat accctaata tcccagcaag ataatgtcct gtcttctaag 5760
aggtgcatca agcctggtac atactgaaaa ccctataagg tcctggataa tttttgtttg 5820
attattcatt gaagaaacat ttattttcca attgtgtgag tttttgactg ttaataaaaag 5880
aatctgtcaa ccatcaaaga ggtctgcatt atgcttgcatt gtcaaaaaca ttaaaaatcc 5940
tataaatcta ctgtcatttt cactgaagtt tccaagggaa aggaattgta attttgggct 6000
gttg 6004

```

<210> 19
 <211> 854
 <212> DNA
 <213> Homo sapiens

<220>
 <223> phospholipase A2, group IIA (PLA2G2A); rheumatoid
 arthritic synovial fluid phospholipase A2 (RASf-A
 PLA2); phosphatidylcholine 2-acylhydrolase;
 non-pancreatic secretory phospholipase A2 (NPS-PLA2)

```

<400> 19
gaattcccaa ctctggagtc ctctgagaga gccaccaagg aggagcaggg gagcgacggc 60
cggggcagaa gttgagacca cccagcagag gagctaggcc agtccatctg catttgtcac 120
ccaagaactc ttaccatgaa gaccctccta ctgttggcag tgatcatgat ctttggccta 180
ctgcaggccc atgggaattt ggtgaatttc cacagaatga tcaagttgac gacaggaaag 240
gaagccgcac tcagttatgg cttctacggc tgccactgtg gcgtgggtgg cagaggatcc 300
cccaaggatg caacggatcg ctgctgtgtc actcatgact gttgctacaa acgtctggag 360
aaacgtggat gtggcaccaa atttctgagc tacaagttta gcaactcggg gagcagaatc 420
acctgtgcaa aacaggactc ctgcagaagt caactgtgtg agtgtgataa ggctgtgtcc 480
acctgttttg ctagaacaaa gacgacctac aataaaaagt accagtacta ttccaataaa 540
cactgcagag ggagcaccac tcgttgctga gtccctctt ccctggaaac cttccacca 600
gtgctgaatt tccctctctc ataccctccc tccctaccct aaccaagttc cttggccatg 660
cagaaagcat ccctcaccca tccctagaggc caggcaggag cccttctata cccaccaga 720
atgagacatc cagcagattt ccagccttct actgctctcc tccacctcaa ctccgtgctt 780
aaccaaagaa gctgtactcc ggggggtctc ttctgaataa agcaattagc aaatcaaaaa 840
aaaaaaagga attc 854

```

<210> 20
 <211> 269
 <212> DNA
 <213> Homo sapiens

<220>
 <223> serum amyloid A (SAA, SAA1); tumor protein p53
 inducible protein 4 (TP53I4, PIG4)

```

<400> 20
ctgcagaagt gatcagcaat gccagagaga atatccagag attctttggc catggtgctg 60
aggactcgct ggccgatcag gctgccaatg aatggggcag gaggggcaaa gaccccaatc 120
acttccgacc tgctggcctg cctgagaaat actgagcttc ctcttctact tgctctcagg 180
agatctggct gtgaggccct cagggcaggg atacaaagcg gggagagggt acacaatggg 240
tatctaataa atacttaaga ggtggaaaa 269

```

<210> 21
 <211> 3460
 <212> DNA
 <213> Homo sapiens

<220>
 <223> serum amyloid A (SAA, SAA1); tumor protein p53
 inducible protein 4 (TP53I4, FIG4)

<400> 21
 tataaatagc agccactctc cctggcagac agggacccgc agctcagcta cagcacagat 60
 cagggtgagga gcacacaagg agtgattttt aaaacttact ctgttttctc tttcccaaca 120
 agattatcat ttccctttaa aaaaatagtt atccctggggc atacagccat accatttctga 180
 aggtgtctta tctcctctga tctaggttaag cagggtcggg cctggtaagt acttggatgg 240
 gagaacacct gggaataacca gtgctaaagg ctttaagaat aaaaaataat gatcctgctt 300
 tgtttatccc catgttgagt tctgtgtcgg tggatcatgag ggtaacacac ggtaaatgcg 360
 ttatggggaa ttattaggct acttgaggga gtgatcagtc tggtggtaac tcctgccttc 420
 ctccatcagt gccacttggc atcctcttat cagtcagctt caggctatgg ttagaaccag 480
 gcttctgctc tgagtgaagt cctctcaagg ttccctagat agccactaga ctctaataag 540
 atccagtggg aataaccagg ctctcgtgga atataagtc caagggaagc tgtgccagtc 600
 ttgtggcgac tgcctgactt ctcccttcat ttcagcacca tgaagcttct caggggcctg 660
 gttttctgct ccttggctct gggtgtcagc agccgaagct tcttttctgt ccttggcgag 720
 gcttttgatg gtaaggcttc agaaggtttg caggatttct aagagaaaca tcgccctgga 780
 cctataaact ggggaaaatg atgctttcgg aaggctgctt ttgaaccaca gatttgctag 840
 tgtctgcgtt gctgaggcct gccaggaact agggtttgct ggggtgcctg tctcgagtct 900
 ttcagagctg ctgggaatat ccctttcccg tagtgcagct tctaggatgt gttaagtggg 960
 tggatcacat ttcagaagcc gctgcaaggt gtatcaaaaa cacatctcct gagccgtaag 1020
 gaacggggca tccagtaaca acgcacacgg ggtatttttg ggcttcctta agatttgagc 1080
 cgctgcctta gggtgtgctg ccaatgtgcc tggggagctg ctaaacagat tagagagtcg 1140
 aggtattgtg tcagttactc agagaaagaa caatcatcct ttccaggagc acctgagctg 1200
 tttgttttga gtagaagatg caaaaataagg cctgcaattg gtataaaatg cctcagcata 1260
 aatcgcatag gagtatgact aaggctgttg actcttctgt cttctttctc cttcctcctt 1320
 cgatttccta gttggataat gtacagggct ctttagctc gctctgtcag gggctccctt 1380
 cctggtttgt tctgtttcca ttcttccttc tccagccttc ttgacaagag ctgggaacta 1440
 acgtgcctca agccccaca aggaccacag cattttctca tctagtttca gaatgactct 1500
 gtaggcaggc atcccttctg taagggtgaga aagctgagac ttagagcagc tgaggccaat 1560
 gccaggggac ttaactgccag tcagcagggtg gcagggcaga gtttagcccg gctgtgcttg 1620
 aggtcagggc tcttgccagg tagacgctca ctgaccacct cccagagttg atggttataa 1680
 tctcagacac accttggcat cacctaacta cccatgcctt caactcccca gcagagtctg 1740
 cagaaactgg cctgggggtg ggcctgggca ctcggaactt tcagtttctg tttctctctg 1800
 ggtgattaga aagtcagcc aaggctcacg cctgtaattc cagcactttg ggtggccaag 1860
 gtggatgaat cacttgaggt catgagttcc ggagcagcct ggccaacatg gtgaaccctt 1920
 gtgtctacta aaaatatgaa aatgtagcca ggcgtgggtg caggcactgt aatcccagct 1980
 actcaggagg ctgaagcagg aaaatacttg aaccgggaag cgggaagttgt agtgagttac 2040
 attgctccag tgtgtctccac ctggtgacag aagtgcaga catgccgtct aaaaaataa 2100
 aaaaagaaaa aaaaagtcaa ccacggcgga gaaccgctag actctattgc ttcctcaagc 2160
 aaccacagat atcagtacag cctactgaga aagtgtttag ggacttttat gctcctaaca 2220
 gtcactggaa ctgaggtcac aatgacatgt attcatttgc aagatatata ctttagctag 2280
 tcagggcaga agctactcct ggtcgtcctg ccacctttct cagcatcagt attccatgtc 2340
 accacctcat tcatatacac tccctgatct tatcatagc agcttcattc tatagcagt 2400
 gctcttcacc agggcacttg aagaagccaa ctaggataaa ggaatgtgct tctaaccctat 2460
 gtatccaggc tgctatgata acaggctgaa agcttgaagt cagtggaga tttgtccttc 2520
 tttcattccc ctctaagggtg ttgttggagt ctttatgttc tcctgatgtc ccttctgcct 2580
 ttcccttctc ttccaggggc tcgggacatg tggagagcct actctgacat gagagaagcc 2640
 aattacatcg gctcagacaa atacttccat gctcggggga actatgatgc tgccaaaagg 2700
 ggacctgggg gtgcctgggc tgcagaagtg atcaggtaac tgagctcctg ggacgttagg 2760
 gctgggtgag cagagcttgc ctgccttggg cagtcaggag ggagacgagc tccttgtgga 2820
 gagttagagg ctgtggtccc tcctcttctt gccctctctc tgccctctgt ctcagtgtga 2880
 gggctctgag ggaatgttag agtgagtgat tcctccctc cctctgggt gctgttatca 2940
 gctaggggtg ccagctgtct gatggggcag tgccaggcag gtagtgttta tctcttcttg 3000
 ccttggcctt ttctgggctc ctctctagcc ctcccttgaa cggggaagaa tgggaggggtg 3060

```

agctgttgct cactggcctg atgattaatc tccttcttgc ctgcctggac tacagcaatg 3120
ccagagagaa tatccagaga ctcacaggcc gtggtgcgga ggactcgctg gccgatcagg 3180
ctgccaataa atggggcagg agtggcagag accccaatca cttccgacct gctggcctgc 3240
ctgagaaata ctgagcttcc tcttcaactc gctctcagga gacctggcta tgaggccctc 3300
ggggcaggga tacaaagtta gtgaggtcta tgtccagaga agctgagata tggcatataa 3360
taggcatcta ataaatgctt aagaggtgga atttgttaaa ggccctcggg gcagggatac 3420
aaagttagtg aggtctatgt ccagagaagc tgagatatgg 3460

```

<210> 22
 <211> 748
 <212> DNA
 <213> Homo sapiens

<220>
 <223> lysozyme (LYZ, LZM) precursor

```

<400> 22
cctagcagtc aacatgaagg ctctcattgt tctggggcctt gtccctccttt ctgttacggt 60
ccagggcaag gtctttgaaa ggtgtgagtt ggccagaact ctgaaaagat tgggaatgga 120
tggctacagg ggaatgagcc tagcaaactg gatgtgtttg gccaaatggg agagtgggta 180
caacacacga gctacaaact acaatgctgg agacagaagc actgattatg ggatatttca 240
gatcaatagc cgctactggt gtaatgatgg caaaaccca ggagcagtta atgcctgtca 300
tttatcctgc agtgctttgc tgcaagataa catcgctgat gctgtagctt gtgcaaagag 360
ggttgctcgt gatccacaag gcattagagc atgggtggca tggagaaatc gttgtcaaaa 420
cagagatgtc cgtcagtatg ttcaagggtt tggagtgtaa ctccagaatt ttcttcttc 480
agctcatttt gtctctctca caattaaggg agtaggttaa gtgaaaggtc acataccatt 540
atttcccttt caaacaataa atatttttac agaagcagga gcaaaatatg gcctttcttc 600
taagagatat aatgttcact aaatgtggtt atttttatat taagcctaca acatttttta 660
gtttgcaaat agaactaata ctggtgaaaa tttacctaaa accttggtta ttaaatacat 720
ctccagtaca ttccgttctt tttttttg 748

```

<210> 23
 <211> 1971
 <212> DNA
 <213> Homo sapiens

<220>
 <223> cytochrome P-450, family 3, subfamily A, polypeptide 7
 (CYP3A7); cytochrome P-450 HFLa; aryl hydrocarbon hydroxylase;
 microsomal monooxygenase; flavoprotein-linked monooxygenase;
 xenobiotic monooxygenase

```

<400> 23
gtgatggatc tcatcccaaa cttggccgtg gaaacctggc ttctcctggc tgtcagcctg 60
atactcctct atctatatgg aaccctgaca catggacttt ttaagaagct tgggaattcca 120
gggcccacac ctctgccttt tttgggaaat gctttgtcct tccgtaaggg ctattggacg 180
tttgacatgg aatgttataa aaagtataga aaagtctggg gtattttatga ctgtcaacag 240
cctatgcttg ctatcacaga tcccgcacat atcaaaacag tgctagttaa agaatgttat 300
tctgtcttca caaaccggag gcctttcggg ccagtgggat ttatgaaaaa tgccatctct 360
atagctgagg atgaagaatg gaagagaata cgatcattgc tgtctccaac attcaccagc 420
ggaaaactca aggagatggt ccctatcatt gcccagtatg gagatgtgtt ggtgagaaat 480
ctgaggcggg aagcagagac aggcaagcct gtcaccttga aacacgtctt tggggcctac 540
agcatggatg tgatcactag cacatcattt ggagttagca tgcactctct caacaatcca 600
caagaccctt ttgtggaaaa caccaagaag cttttaagat ttaatccatt agatccattc 660
gttctctcaa taaaagtctt tccattcctt accccaattc ttgaagcatt aaatatcact 720
gtgtttccaa gaaaagttat aagttttcta acaaaatctg taaaacagat aaaagaaggt 780
cgctcaaag agacacaaaa gcaccgagtg gatttctctc agctgatgat tgactctcag 840
aattcaaaag actctgagac ccacaaagct ctgtctgate tggagctcat ggcccaatca 900
attatcttta tttttgctgg ctatgaaacc acgagcagtg ttctctcctt cattatata 960
gaactggcca ctcaccctga tgtccagcag aaagtgcaga aggaaattga tacagtttta 1020
cccaataagg caccaccac ctatgatact gtgctacagt tggagtatct tgacatggtg 1080

```

gtgaatgaaa	cactcagatt	attccccagtt	gctatgagac	ttgagaggggt	ctgcaaaaaa	1140
gatgttgaaa	tcaatgggat	gtttattccc	aaaggggtgg	tggtgatgat	tccaagctat	1200
gttcttcatc	atgacccaaa	gtactggaca	gagcctgaga	agttcctccc	tgaaagggtc	1260
agtaaaaaga	acaaggacaa	catagatcct	tacatatata	caccctttgg	aagtggaccc	1320
agaaactgca	ttggcatgag	gtttgctctc	gtgaacatga	aacttgctct	agtcagagtc	1380
cttcagaact	tctccttcaa	accttgtaaa	gaaacacaga	tccccctgaa	attacgcttt	1440
ggaggacttc	ttctaacaga	aaaacccatt	gttctaaagg	ctgagtcaag	ggatgagacc	1500
gtaagtggag	cctgatttcc	ctaaggactt	ctggtttgct	ctttaagaaa	gctgtgcccc	1560
agaacaccag	agacctcaaa	ttactttaca	aatagaaccc	tgaaatgaag	acgggcttca	1620
tccaatgtgc	tgcataaata	atcagggatt	ctgtacgtgc	attgtgctct	ctcatggctc	1680
gtatagagtg	ttatacttgg	taatatagag	gagatgacca	aatcagtgtc	ggggaagtag	1740
atttggttc	tctgcttctc	ataggactat	ctccaccacc	cccagttagc	accattaact	1800
cctcctgagc	tctgataaca	taattaacat	ttctcaataa	tttcaaccac	aatcattaat	1860
aaaaatagga	attattttga	tggtcttaac	agtgcatttt	atatcatgtg	ttatatctgt	1920
agtattctat	agtaagcttt	atattaagca	aatcaataaa	aacctcttta	c	1971

<210> 24

<211> 1653

<212> DNA

<213> Homo sapiens

<220>

<223> antioxidant protein 2 (AOP2); peroxiredoxin 6
(PRDX6); 1-Cys periredoxin (1-Cys PRX);
non-selenium glutathione peroxidase (NSGPx);
KIAA0106

<400> 24

cggttgcttg	ctgtcccagc	ggcgccccct	catcaccgtc	gccatgcccg	gaggtctgct	60
tctcggggac	gtggctccca	actttgaggc	caataccacc	gtcggccgca	tccgtttcca	120
cgactttctg	ggagactcat	ggggcattct	cttctcccac	cctcgggact	ttaccccagt	180
gtgcaccaca	gagcttgcca	gagctgcaaa	gctggcacca	gaatttgcca	agaggaatgt	240
taagttgatt	gccctttcaa	tagacagtgt	tgaggaccat	cttgccctgga	gcaaggatat	300
caatgcttac	aattgtgaag	agcccacaga	aaagttacct	tttcccatca	tcgatgatag	360
gaatcgggag	cttgccatcc	tgttgggcat	gctggatcca	gcagagaagg	atgaaaaggg	420
catgcctgtg	acagctcgtg	tggtgtttgt	ttttggtcct	gataagaagc	tgaagctgtc	480
tatcctctac	ccagctacca	ctggcaggaa	ctttgatgag	attctcaggg	tagtcatctc	540
tctccagctg	acagcagaaa	aaaggggtgc	caccccagtt	gatttgaagg	atggggatag	600
tgtgatggtc	cttccaacca	tccctgaaga	agaagccaaa	aaacttttcc	cgaaggagt	660
cttcaccaaa	gagctcccat	ctggcaagaa	atacctccgc	tacacacccc	agccttaagt	720
ctcttgagga	agttggtgct	gtgagccaga	ggatgtcagc	tgccaattgt	gttttcctgc	780
agcaattcca	taaacacatc	ctggtgtcat	cacagccaag	gttttttaggt	tgctatacca	840
atggcttatt	aaatgaaaat	ggcactaaaa	gtttcttgag	attctttata	ctctctgcct	900
tcagcaatca	attccattca	tacatcagca	ctctgctggg	tctgtttgaa	atatgttctg	960
tatttaaaac	tcaaattcttg	ttggatctct	gcagggcttg	tgaccaatga	agtcataatt	1020
gttgatgggt	gacaaaagctt	gcttcaactcc	atcagagaat	gactatcaat	tttttttttaa	1080
ctgtcctatc	acgtcctctc	ctgtcaccca	ttttgaagag	tggcagaact	tgaagttcaa	1140
cttcctctgt	aaatatccaa	gtataaagcc	caggaacttc	tagaataacc	cagatgcgct	1200
ttaatttttt	ttaatatggt	ttgatcacag	aacttctaga	ataaccacga	tgctctttca	1260
tattcttttta	atacatcttg	atcacagctg	ggggaaaaaa	agcttttttaa	ttctgtacct	1320
tcctagtaga	taagtgaaga	gcaggggaaag	agacctttta	atatttttgct	ataaaaaaat	1380
ttgtgataag	tttctatcaa	aatggggaga	ttgcagaaaa	ggcttccctt	ggctcccaag	1440
gaggtgtagc	aggtgtgagc	aatatttagtg	ccatgtgcct	ttcacacagg	gtttgcattt	1500
atcagtctgt	tttccgatga	tgtgtacatg	aaagagtaca	ccatgtgaag	agaagagaga	1560
atgattgaaa	atgttttagt	atagaactct	tcttgacgtg	ggttgctatt	ttctagattt	1620
tacttttttag	ggaacaaaat	aaaatccttt	ggt			1653

<210> 25

<211> 367.

<212> DNA

<213> Homo sapiens

<220>
 <223> metallothionein

<400> 25
 ctccagtctc acctcggctt gcaatggacc ccaactgctc ctgcgaggct ggtggctcct 60
 ggcctcgcgc cggctcctgc aagtgcacaa agtgcaaatg cacctcctgc aagaagagct 120
 gctgctcctg ttgccccctg ggctgtgcca agtggtgcca gggctgcacg tgcaaaagggg 180
 cgtcagagaa gtgcagctgc tgtgcctgat gtcgggacag ccctgctgtc agatgaaaac 240
 agaatgacac gtaaaatccg aggttttttt tttctacaac tccgactcat ttgctacatt 300
 cctttttttt tgtgaaatat gtgaataata attaaacact tagacttgaa aaaaaaaaaa 360
 aaaaaaa 367

<210> 26
 <211> 1922
 <212> DNA
 <213> Homo sapiens

<220>
 <223> metallothionein-IG (MT1G)

<400> 26
 gagacctggg cggttggtgaa ggcgagggga aagccagaat actgggggtgg cggacgccaa 60
 ggggcgggtg tagcaggcaa cctcagggaa gctgggaagg cctagcaggg tgagagaacc 120
 cgcacacggg gggcacagcg cctccctcgc gagccgggtg gaaagggggc gcctgcggtg 180
 tgcgcccagc tgcgctcaag ggaccttgca cttggcccat ctctgctgca cagcccaggc 240
 cgggaccgcg ggcggtgcgg actcagcggg ctgggtgcaa gggcggggcg gggcgtctgc 300
 gcccgggccc gtctcctgac tataaaagca gccgctggct gttgggctcc actccgcctt 360
 ccacgtgcac ccactgcctc ttccctttct gcttgggaac tctagtctcg cctcgggttg 420
 caatggaccc caactgctcc tgtgccgctg gtaaggagcg cccgggttct gtgccttgga 480
 atgccaaatt ccagacacc atagagagtg tccctgggtt tgaggaggtc gtattttgct 540
 atcagaggtg aggggactcc tttattggct cagtgtcttc ctggttgcca agctcctgag 600
 ggcatttttc tcctccctgt tcctctatgt gaggtcaaggc tgtcctgcct cacgtcacct 660
 tcctgctcat gtcagagttg agggctcctga ggctcaaggc tgtcctgcct cacgtcacct 720
 agttggtcac agggctgctg gctgagcccc aattctctaa cctgactctg agctaccgga 780
 ttggatagga gacattggat aggagggaca ttgcctcttc caagttcagg acagaaagtc 840
 gaagtcttcc taggcctgga tctgcaggga ctttctcttg gagtagaaat aggagggtgc 900
 ttggttttcc cagcatgaat ggagaggaca tggggcttct ctctcctgct tctgagtggg 960
 aaaggagctc tgacggctgg ctctggcaca gagaaggggg aagtggacac tcattgaccc 1020
 actgctgtac ctctctgcat tcaactcaccg ttcactggct ttttctcttc tagcagggtg 1080
 cctctgcacc tgcgcagct cctgcaagtg caaagagtgc aaatgcacct cctgcaagaa 1140
 gagtgagtgc ggggccatct ccagggaatct ggggctgtgg ctaagggttg gaggaaccc 1200
 aaggctgtcc ctgagtgcct gcttctgggg aaccggcctt cctttgtccc tgtagggttg 1260
 cagcctgtc tagtcttctg cactttccaa ggcttatgtg aggtggggca gctttctcaa 1320
 aggaagaccc attccaatgt ccaccagtgt tctcctgaca aaaaccatgc catcatgaac 1380
 taagggtcct ctggggctgg agggatggag acaggcctct gttggggcag ggagttctat 1440
 gatcgagtct gctctgacct ctcaatctcc tttcctcccc aaggctgctg ctctgctgc 1500
 cctgtgggct gtgccaaagt tgcccaaggc tgcactctgca aaggggcatc ggagaagtgc 1560
 agctgctgcg cctgatgtcg ggacagccct gctcccaagt acaaatagag tgacccgtaa 1620
 aatctaggat tttttgtttt ttgctacaat cttgaccct ttgctacatt cccttttttc 1680
 tgtgaaatat gtgaataata attaaacact tagacttgat tcccgttctg gttcctgttg 1740
 tgttttttga atgagggact ggggtgggag attgaactgg gaggttcacac tgggctctgg 1800
 acggaatgt gagtgctaaa caagctgagc gccttcaggc agccccgtta cttctctgac 1860
 ctcttctctc tgtaaaaggc acctgcaccg tgccggatga tatgggggat gggacatacg 1920
 cg 1922

<210> 27
 <211> 285
 <212> DNA
 <213> Homo sapiens

<220>

<223> nitric oxide synthase 2 (inducible, hepatocyte) (NOS2, NOS2A)

<400> 27

```
ggccagtgtg ggaggaagcc caggggtgtct ggcgagggtg gggagggccc tgctgggagc 60
cgagggctga tatccactgg ggtgccaccc aggttgtctg catggataag tacaggctga 120
gctgcctgga ggaggaacgg ctgctgttgg ttggtgaccag tacgtttggc aatggagact 180
gccctggcaa tggagaggtg ggtggcctga ggtctggctg gtctaggggg ttgtagggca 240
cgaggaggacc caggaaaggg tctgggggat ggcgcaggtc ctacg 285
```

<210> 28

<211> 3411

<212> DNA

<213> Homo sapiens

<220>

<223> regenerating islet-derived 1 beta (REG1B) precursor;
regenerating protein I beta; lithostathine 1 beta
precursor; secretory pancreatic stone protein 2;
pancreatic thread protein (PTP)

<400> 28

```
aggaagggca aagctcaaca tcaacttgga cagtttgcca acctgtttgt ggtaagttga 60
tgtcatttgt gaccactcct aatgtgtgcc accaataagc tattcctgat gccagaatct 120
cttactgtca gtgccctctg taggccttct gatccttact ccttgctcca ccattgttt 180
atatcatgta gttctctctc agaccctgat ataaagctcc tactctgtct gacctgacaa 240
gccacctcaa gtggacaagg cacttaccaa caggtaaagg ggcattacag gagaagagca 300
tgtctaactg gggattttct cttttcattt tgaggtagat acagggtgat tttctgaata 360
aaagatccca gtagtaataa aacttaagca agaccaaagc tgatttcggg taatttggcc 420
tctgttatcc ccaaaccaaa agagaaatat ctgggagtgat agctatctca gtggaccttt 480
ctgctcacag gaattcagag aggagaggat gttagaaaga taacagggtgc tctgctctct 540
ctttcaaacc ctcttcctctg tgttctccta cagagattgc tgatttgctc cttagcaag 600
agattcactg ccgctaagca tggctcagac caactcgttc ttcattgctga tctctcctc 660
gatgttctctg tctctgagcc aaggtagagat tttccccac acttcccaca accccaactc 720
tgaattcttc cctccatcct catgtataag gttcacttga aaaaaagcag agtcaacatc 780
agggtttttt tatgttgttc agtgatcatt atggctgatt ttatcccatt caaaaacacc 840
ctcaccttca ttcattgggtt tgagacagaa tttaatagga ccacttatag gtgaccattg 900
tggttgagtt tatctgattg aatctatatg cgatggcagt ttgggggatg tttttatgta 960
gtcattgcta ggatgagagc taaggcaaac gtgtgcaggg aaaccgagag aaacttgaga 1020
aaggaggaag cctgggtcct taaaggcaga agcctcagcc tcagaattaa aggaaaacga 1080
gaactcattt atttagccta ttcattgtga gctcttgtct tgagcagagg aaactagaga 1140
gaaaagagat aggatgcagg agggcagaag tgagcaatcg cccagatatt cactgtatcc 1200
atatgttctt ataaggacac caagaagccc ctattcacct tccagccttt tccctgacct 1260
gagattcttt cttagttatc tctttttttt tttccccagg ccaggagtcc cagacagagc 1320
tgcctaatac ccgaatcagc tgcccagaag gcaccaatgc ctatcgctcc tactgctact 1380
actttaatga agaccctgag acctgggttg atgcagatgt gaggtaggag agcagcaggg 1440
gaaggagggc ttatgaaggt agaggcagct gctaatttgc agtgtgttct gtggctgcaa 1500
tgagataaga ttgatccctt cctatttcca ccactggctc aaaacttccc aatctacttt 1560
atcccacatc ttgacacatt cccagcacag agatgctggg ggtcagtgac agcatcatca 1620
gggacatttc tgtgctgtcc tttttctgtt acatcctctg gaaggtctca gtatatccct 1680
cacaccttcc ttctccactg agtgcctcat tttcttctcc aacagctcta ttgccagaac 1740
atgaattcag gcaacctggt gtctgtgtct acccaggcgg aggggtgcctt cgtggcctca 1800
ctgattaagg agagtagcac tgatgacagc aatgtctgga ttggcctcca tgacccaaaa 1860
aaggctcagc tgcagccacc tctatctcct tataaacatt tttgagaggt aagaggggacg 1920
tttaaggctc ggcaccgcaa tcaccaactt ttatcttttt gtttgtttaa ataaaagcaa 1980
cctctttata gatcctataa tgtatgagtt gtgaagttca gtgtaggtag ttagagacat 2040
gagctgaagg ctgaattttc tgggctctgg gaattcatgc accactcat tgtgtctact 2100
tctagaaatg catctttatg tacaactttt tccctatttt gctattgtct gtcttggaag 2160
aggtccctct gtagactata tagaaaaatg gtagtgaggg agaactctact gctggcattt 2220
gttatacatt ttatacaagt gtataaaact gtacagtata ttatttagtt taacactata 2280
aactaaataa tatatcaaca actactctac agccaatggt atgctggata tgagagttct 2340
gagattcagg aaaaaaatca gaaaccactc tctgtaatgg gcttttatgg gtctctgtat 2400
```

caaattctga	acacttatta	tttgctagaa	gaggaggagg	aattcggaca	ttctagagaa	2460
ggagaagctt	agagcaaaaag	cagaggaaat	gatatgatat	tcatggtgac	aacaatgttt	2520
attctttctg	ctataacttg	gcctgtttct	gagtgtgcac	acaggcctgg	ttattctatt	2580
gatttttgag	tgaccatggc	ccctgttctg	gcccttctcc	atctagaacc	gccgctggca	2640
ctggagtagt	gggtccctgg	tctcctacaa	gtcctgggac	actggatccc	cgagcagtgc	2700
taatgctggc	tactgtgcaa	gcctgacttc	atgctcaggt	gagaggcaga	caatctatcc	2760
acctgttgcc	atttccttcc	cacttatctc	tggggatgaa	catggggact	gggatagagg	2820
aaaggtaagc	tccttatctg	gaaaataaag	aagtatttcc	tctagttttt	tgttctgagt	2880
cctaggttga	ggaggggcta	cactccttct	gaccccttat	gtctgacact	tctcattgta	2940
ctataggatt	caagaaatgg	aaggatgaat	cttgtgagaa	gaagttctcc	tttgtttgca	3000
agttcaaaaa	ctagaggaag	ctgaaaaatg	gatgtctaga	actggtcctg	caattactat	3060
gaagtcaaaa	attaaactag	actatgtctc	caactcagtt	cagaccatct	cctccctaata	3120
gagtttgcac	cgctgatctt	cagtaccttc	acctgtctca	gtctctagag	ccctgaaaaa	3180
taaaaacaaa	cttattttta	tccagtgttc	tgtcttctgc	atttgctctt	tctacagccc	3240
atgcttgggt	ggttgggggtg	ggaatgattg	tcacactcca	gagcttgcca	tggcccattcc	3300
acttgttaaa	accccaactca	cattttatgt	atgtcaggct	tatgaacatg	tgggtggcctt	3360
gtttatgaca	agataaaaaag	attaagattt	catccacaac	acatgttagc	a	3411

<210> 29

<211> 4251

<212> DNA

<213> Homo sapiens

<220>

<223> regenerating islet-derived 1 alpha (REG1A) precursor;
 regenerating protein I alpha; lithostathine 1 alpha
 precursor; secretory pancreatic stone protein (PSP, PSPS);
 pancreatic thread protein (PTP)

<400> 29

gaattcctgg	gctcaagtga	tcctctcatg	tcagtctccc	aaagtgtctg	gatgacaggc	60
ttgagccacc	acaccaggcc	catcatcagt	ttttatataa	agaaaaaaaa	accttaaaat	120
tgtaggcaa	atactatgac	aaattgtaat	atataattctt	acatttcaga	tttttatttt	180
ttaaactgta	taagaattga	ttaataaata	aaatttagta	ttaatctgtc	ttttaaaacc	240
atatataaag	tttatcaaat	agcttataac	ttcttgcaac	tgaatttttg	tattcaatgt	300
tatggctttg	atactagtcc	aagttgaaat	atagatatct	actttattcg	atttaaattc	360
tgtttagtat	tttattatat	tttgttaatc	catttgtccc	aattcatata	cttatctctc	420
tttctgtgaa	tattcagggt	agttttttct	tcctaatttt	gcattctgat	tggcttttat	480
tcctgaatt	ataaatgact	attctatgat	gattctggta	aatactcaat	ttcaccacac	540
aatctttgac	ttcatactaa	caaacagttg	acttcaaattg	gacaatttca	atgaaggctg	600
acttcatatt	tagctccttt	aagcttcctt	aggcatcagc	tctctacaat	tctcacattg	660
agaatatgtg	tattttgtta	gctcaaaacct	tgtagacat	gttaaatgtt	tagaaatata	720
aatttaacct	accccttgag	gtaggtcttg	agaggtttgt	gagcctaaaa	agacatggag	780
gaaccactta	ttgccacaag	cacattgttc	taaattattt	ggaatcagtt	aattcttccc	840
catctcctac	ccatgcctga	caccaaagag	gagcctctaa	atttacaggg	aatacaagga	900
agtctactgt	tctctgctcc	tctctgggtt	attagggcac	atgggagccc	tcagttgttt	960
tctgctgagc	aagagcaaaag	tcacaccttg	acttagacag	cttgccaaat	tttttgccag	1020
aaggggacct	gagttgtgac	cactcccagt	gtgtgccggg	aaaaggctca	tactggtgcc	1080
agaatctctt	actgtcaatg	ctcccaaaac	tcaccgcttg	ccccacccc	ttttgcttaa	1140
atgacgtggt	tcttatctca	gatcctgata	taaagctcct	acagctacct	ggcctgagaa	1200
gccaaactcag	actcagccaa	caggtaagtg	ggcattacag	gagaagggcg	tctctaacat	1260
gcaactgtaga	tctaaaatct	tcgggaagat	acagcatgag	tttctgtcca	agaggtttta	1320
gctgtaagga	agcctcagtg	ggatccaaag	ttgtttttca	gttactgagt	ctgtataatc	1380
cccactctca	agagaaacat	ttgaagggtg	gggtgtctca	gaggaccttc	ctggtctcag	1440
aaattctgag	aggaggtttt	aagggaaggta	atagggtgctt	tgctctccat	ctctcagaac	1500
ccccttctct	gtgttctcct	atagagattg	ttgatttgcc	tcttaagcaa	gagattcatt	1560
gcagctcagc	atggctcaga	ccagctcata	cttcatgctg	atctcctgcc	tgatgtttct	1620
gtctcagagc	caaggtaaga	tctcttttcc	accaaccaac	tctttctagc	cctgaagact	1680
tcactctatc	cccaagcata	cgggtctact	tgaaaaaaa	aaaaaagcag	agtcactgtt	1740
aaggggtgtt	ttgtgtgtgt	tagtgatctt	tattgcttat	ctcttcacat	ttatatacat	1800
ccacacctca	ttaaggagtt	ggagctagaa	tttaaatga	ccccttataa	gcaactgctg	1860

cagctggcat	gagtttatct	gattaaattt	atacgtgatg	gtggatttgg	ggatgtctgt	1920
gtgtagacag	tcactaatgg	ggtggagaac	tgaagagagc	cttgtgttca	gggaaaccaa	1980
gtcaggcttg	agaaagtaga	aggctgagtc	cttcaaggta	gaagagcctg	agctccagac	2040
ataaaaggga	aactggagac	ttgtttcttt	ggcctattca	ttctgttttt	tttccctga	2100
tcaaagaaac	caaagacaga	agatgtagga	tgcaggagca	atagttagca	gtcatcccat	2160
aatagactgg	attcttctgt	ttctataaag	gaacctcaga	agctcttacc	tcaccttcaa	2220
gccttttcc	taccctgaga	gcctccttta	attgtctctt	ctttttcagg	ccaagaggcc	2280
cagacagagt	tgccccaggc	ccggatcagc	tgcccagaag	gcaccaatgc	ctatcgctcc	2340
tactgctact	actttaatga	agaccgcgag	acctgggttg	atgcagatgt	gagttaggag	2400
agcagtgtgg	gaagggagac	tcatgaaggg	aggggaagct	gccactctcc	agtgtgttca	2460
gtggctgcaa	tgagatgaga	ctgaaccctt	tgctatacta	tcatcagccc	caaactttcc	2520
aatctacttt	atcccattat	tcagcacatt	cccagcaca	agaacctggt	ggtcagtgc	2580
agcatcatca	cggacattac	tctgctgtcc	tttttctgac	ccgtcctctt	ggaggactca	2640
gtatatccgt	cacaacttcc	tcctccactg	agtgtctccat	tttcttctgc	aacagctcta	2700
ttgccagaac	atgaattcgg	gcaacctggt	gtctgtgtct	accagggccg	agggtgcctt	2760
tgtggcctca	ctgattaagg	agagtggcac	tgatgacttc	aatgtctgga	ttgccctcca	2820
tgaccccaaa	aaggtaggct	gcagccttct	ttatctccta	atgatcaggt	ttgagaagta	2880
agaaggaggt	tcaagttctg	gtctcttaag	taccagcttt	tatcgctttc	cagaaatcag	2940
gctgtttaca	gacccctcaa	tgtcctgtgt	agcaagggtg	actgtagatg	attggagata	3000
taagtgaag	gctgaatttc	ctaggtgttc	ttgtcattca	tgaataaaact	tattctgttt	3060
tcagtcacaa	aagcatcttt	atgcaccaac	tctttaccta	ttttgttact	gtcagagtca	3120
caagagagac	tagattgccg	actatataag	aaaggagact	tgtggtaaaa	atctgctgct	3180
gtactgctgg	catttgggaa	cctggtagta	tactaaataa	tataatata	caacaactaa	3240
tggtcagcca	atgctatgct	ggatatgagg	gtcctgggcc	acaaagacaa	aaaatcagga	3300
accacttttt	aagttagata	ctttgggtct	ctgtcaaatt	cataaactt	atttcttggg	3360
ggaatacagt	taatgagttg	gacagttcag	gaaagaagtt	tagagcaata	gcaaaggaaa	3420
ggaacaata	tttagcaagg	tttattcttc	ctttgtgtct	tagcatgttt	ctgagtgtgc	3480
acacaggccc	agtgattcca	tgtatttttg	agtgaccact	gcctctgttc	tggcccttcc	3540
ccatctagaa	ccgcccgtgg	cactggagca	gtgggtccct	ggtctctctac	aagtccctggg	3600
gcattggagc	cccaagcagt	gttaatcctg	gctactgtgt	gagcctgacc	tcaagcacag	3660
gtgagaggca	gagaatccat	ccacctgttt	ctgttctctc	ctgcttagct	ccagggatgg	3720
aactgggact	gggatagagg	aaagggtgaac	tcctcattaa	ggaaatggat	gtttggtttt	3780
tgtcctgagt	cctaaagcca	ggagggtcat	actctttcgg	gtctcccagt	tgtaactctt	3840
ctcattgact	tataggattc	cagaaatgga	aggatgtgcc	ttgtgaagac	aagtctctct	3900
ttgtctgcaa	gttcaaaaac	tagaggcagc	tggaaaatac	atgtctagaa	ctgatccagc	3960
aattacaacg	gagtcaaaaa	ttaaaccgga	ccatctctcc	aactcaactc	aacctggaca	4020
ctctcttctc	tgctgagttt	gccttggtta	tcttcaatag	ttttacctac	cccagtcttt	4080
ggaaccctaa	ataataaaaa	taaacatggt	tccactattg	tgctgtctta	ctgtgtctgc	4140
tatttccaca	gctgatgcct	gggtggttga	gatgagagtg	attacaacaa	agcttgctct	4200
ggcctatcca	cttcttaaaa	gtccatccgc	ataccatgca	tattggaatt	c	4251

<210> 30

<211> 4497

<212> DNA

<213> Homo sapiens

<220>

<223> pancreatitis-associated protein 1 (PAP, PAP1) precursor;
regenerating islet-derived protein 3 alpha (REG3A,
Reg III-alpha) precursor; hepatocarcinoma-intestine-pancreas
(HIP); proliferation-inducing protein 34 (PIG34)

<400> 30

ctgcagcctt	gaactcctgg	gttcaactga	aggctcctct	acctcagcct	gctgagtagc	60
taggaccaca	agcacacacc	accgcaactg	gcttaaatga	aaatataaat	tgtagagata	120
gggtcttaat	gtgttgccca	ggctgctctt	gaactccttg	cttcagggtga	tcctccacc	180
tcagcctctc	aaagtgtctg	gattatagac	ctgagccaca	gcacctggcc	aactgacctc	240
tgattttaca	caatggctgc	tcttcccttc	tttaactatt	attcattctt	ctttgatctc	300
cattattttga	ctgtagtcct	tcttatgtct	tgttttctct	cattacctct	tattctatca	360
cattgccatt	gtcattctcc	actggggaag	ctctttcttg	ctgaagactg	gaaagacaag	420
tccattcacc	tgattttctg	taagattgtg	gtcatgtat	tgacttgtca	gacaattctg	480

aagtttcatc	aaaattagct	atcatgcttg	cataatggcc	ctgaaccctc	actcctacac	540
ttagcttcag	taccatctat	gtcctcaact	gtccatgata	cttataattc	ccgtaaactc	600
tcacttaaca	cctaacattt	atttaattct	actaggcaag	gtaataagaa	atacataggt	660
ttgcctccag	aagtgggttc	ttagaagaacc	caccagagga	actcctcttt	cagatgtcca	720
cattagaaga	tttcatatca	catttggtgc	cacaggcctt	tgacaaggag	gatgcagagg	780
aaaaagcaaa	cttcacctct	tcctaggga	agtgttgccc	tgccaacagg	aaagaggcaa	840
catctgggaa	aatccccagt	ctttgccagg	aagagtccat	gccaaaccca	ccccatgacc	900
cctgtcctgc	ctactcattg	tcactcttca	ctccaatgtc	cctccccccag	atcctctata	960
aaatcccact	ctttcctgac	cagacaaacc	ataccatata	ccaccagaga	ggtaagtggg	1020
agctgagaga	agatgagacc	cagggaggag	ctactgcaca	tgacacagga	gaatacatgg	1080
gaggggtccct	tcctcaggga	gcacaggaac	tctgagactc	agcaagggtg	tcctgggagg	1140
gctcggggat	gggagagtac	acagattcac	aactcattca	gaactgtaga	agatgatgga	1200
tgtgaccaag	atcacttttag	tcctagggga	ctagagaagg	aaaatgacat	gaggcagtgg	1260
ggatctctgtg	tgttctccca	ctgaccacgc	tttcttttagt	gactcctgat	tgccctctca	1320
agtcgcagac	actatgctgc	ctcccatggc	cctgcccagt	gtatcttggg	tgctgctttc	1380
ctgcctcatg	ctgctgtctc	aggttcaagg	tgagattgct	ttgcctctag	cactgggttc	1440
cctatgaatc	ctcagagcta	acaagaggag	gaaggctcct	gtgtgtcatg	tgaggtaatg	1500
acgtgggtgc	taatgaacct	gcctgcagtt	cttgcatcat	ctctccttcc	ttcagggttaa	1560
cttgcaagtgg	gaggctccat	ggtggtccac	taacagtggg	atgagatggc	ttccatttag	1620
tcagtggact	ctaataataca	ctggtgggaa	agtggactct	aatatacact	ggagggtcag	1680
taatgagatg	tggggaggga	caatgattgg	aggacccaat	gtagagacag	cccagagtga	1740
ggagagtatt	gaatgggtga	ataaggggaa	agggtataata	gagactggat	ggtgctccat	1800
ttactatggc	tattttgaga	taaagaattt	ctgaaaacat	aagggaagat	gaagggtgtg	1860
caggaatgtg	gtcttctctc	ccaaggacat	tcctaggtat	tccccaaagt	catctccac	1920
cccaagcccc	actcttcatt	ttacctctcc	ctctcttctt	ccacctcagg	tgaagaacct	1980
cagagggaac	tgccctctgc	acggatccgc	tgtcccaaag	gctccaaggc	ctatggctcc	2040
cactgctatg	ccttggtttt	gtcaccaaaa	tcctggacag	atgcagatgt	gagtgggttag	2100
atgtggtggt	ggaggtgacc	ggtctcaggg	ggaggagggt	ctccattcag	gagagtccct	2160
tgggaatgag	gatgaacacg	tttatctttc	acacagtcct	cctcccacct	acctttgccc	2220
tgccctccct	cagcaggtct	caggctccct	ctcattctct	ttgttgccct	caaagctggc	2280
cgccagaag	cggccctctg	gaaacctggt	gtctgtgctc	agtggggctg	agggatccct	2340
cgtgtcctcc	ctggtgaaga	gcattgttaa	cagctactca	tacgtctgga	ttgggctcca	2400
tgacccca	caggtgccag	tatatcctcc	ctctctgtta	cctctcaagg	tgctattggt	2460
gccagggccc	actccctgtc	ccctgtgcct	gccaggaag	tacttcaggg	agcactggag	2520
ctcagattct	ggggaatatt	tggggggaaa	gggaaggcca	tgaagcatct	gaagatctga	2580
gttctgtgga	ggtctctatc	tttcagataa	aatcaatctg	ccttctcag	gcgtattaca	2640
taattctcat	atgaggctgg	gttaacaatt	ctctgagctt	catggagtct	ttgcctacta	2700
ttctgaagga	actcttaatg	aagataggat	caatttttgt	ccccatacag	aactgacatt	2760
acttttgagg	ttcacaagct	aatcacaaat	gctacatcaa	ttattgttct	gcaaataata	2820
tattaccttg	aaggtcttca	aaggtcttat	gtttattggc	tggaattttc	caatagcaat	2880
gaggagtcaa	ggaagagttt	cctactcacc	ggcagctact	ggaatagcag	accaactttc	2940
ctcatgctgg	ggagcaaate	agggtgttga	gctaaggggc	catgcaagaa	gagctgcaat	3000
ggccattccc	ttcacctggc	tacctcctct	actctacagg	gcaccgagcc	caatggagaa	3060
ggttgggagt	ggagtagcag	tgatgtgatg	aattactttg	catgggagag	aaatccctcc	3120
accatctcaa	gccccggcca	ctgtgcgagc	ctgtcgagaa	gcacaggtaa	gaaacagagg	3180
agctgcctct	tcccagtggt	ttccatctca	tccccattc	ctgggtctga	ccttcaggaa	3240
atcttctctga	gctagaaaat	acaatgttag	tgtgtcttct	cttatctcct	ctcttctcca	3300
ctttctttga	atctctctcc	tggattggga	cactggtgaa	ggtgaggggag	aggctttaac	3360
ttctaggcta	aaacctggga	tgccccctta	ttggattcac	aagcttctct	agccccattc	3420
catttatgtc	ttctgtctct	ccagcatttc	tgaggtggaa	agattataac	tgtaattgtg	3480
ggttacccta	tgtctgcaag	ttcactgact	agtgcaggag	ggaagtcagc	agcctgtgtt	3540
tggtgtgcaa	ctcatcatgg	gcatgagacc	agtgtgagga	ctcaccctgg	aagagaatat	3600
tcgcttaatt	cccccaacct	gaccacctca	ttcttatctt	tcttctgttt	cttctctccc	3660
gctgtcattt	cagtctcttc	attttgtcat	acggcctaag	gctttaaaga	gcaataaaat	3720
tttttagtctg	cacttgtttg	tcttgatat	gccagtgtca	tagccatact	ctgagaagga	3780
caaagtgttt	gagtggagga	aactttatgg	gtcttgcttc	ttccctattc	acccaggcct	3840
ctagggaaaa	tgatgaagtg	tgcattcccta	ccagtgtgtt	atgatgaggg	tgtgggtcct	3900
gctcatgtag	gatttgtgtt	gtggagagat	gaggacattt	ctctcccgcg	tacttactgc	3960
cctcccattc	ccgtagccca	aacctgacag	tgtgacatga	acagattagg	aggctctgat	4020
ggtgcttaga	atagtacttc	tcagagaatg	gcatacagcag	gatggtagat	aggactttcc	4080
agctcttgaa	ccttcacaga	aacattcatt	tgaactacta	cccatataaa	tggaaataacc	4140

```

ttcacaagag ctaacaatcc caagtgagtg attaaagcat ctgaatgttg caaaaaataa 4200
gaagggatgc atcgaagagg gtagaaagaa gactttttaca ttattttatat caccctccca 4260
tcaatctcag taagcacagc atggagagac attccctaaa cttggggaaa gagagtgaaa 4320
taagcacttg agttttccat ggaccctaac actagggttg cctcagtaag acccagtggc 4380
ctctgactcc aggcagacac ccttggactt agactccagg ctgccttgat gccaggccag 4440
gctctgtggc cccaggctct gtgaccccag gctccaggtc agcccccag actgcag 4497

```

```

<210> 31
<211> 219
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> zinc finger protein 436 (ZNF436), DNA-binding
protein; KIAA1710

```

```

<400> 31
atccacactg gagagaagcc tcacaaatgt aatgagtggt gaaaaagttt ctgccgtctc 60
tctcacctaa tccaacacca aaggacccac agtgggtgaga aaccctatga gtgtgaggag 120
tgtgggaaaa gcttcagccg gagctctcat ctagctcagc accagaggac ccacacgggt 180
gagaaacctt atgaatgtaa cgaatgtggc cgaggcttc 219

```

```

<210> 32
<211> 1599
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> immunoglobulin G gamma 3 (IgG gamma 3, IGHG3)

```

```

<400> 32
tctaaagaag cccctgggag cacagctcat caccatggac tggacctgga ggttcctctt 60
tgtgggtggc gcagctacag gtgtccagtc ccagatgcag gtggtgcagt ctggggctga 120
agtaaagaag cctgggtcct cgggtacggt ctccctgcaag gcatctggag gcaccttcag 180
caactatgct atcagctggg tgcgacaggg ccctggacaa gggcttgagt ggatgggagg 240
gatcatccct ctttttggtg caccaacctc ctacagaaac ttccagggca ggtcacgat 300
taccgcgga aaatccacca gcacagccca catggagctg atcagcctga gatctgagga 360
cacggccgtg tattactgtg cgacagatcg ctacaggcag gcaaattttg accgggcccg 420
ggttggtgtg ttcgacccct ggggccaggg caccctggtc accgtctcct cagcctccac 480
caagggccca tcggtcttcc ccctggcacc ctccctcaaag agcacctctg ggggcacagc 540
ggcctggggt tgccctggta aggactactt cccggaaccg gtgacggtgt cgtggaactc 600
aggcgccctg accagcggtg tgcacacctt cccggctgtc ctacagtcct caggactcta 660
ctccctcagc agcgtggtga ccgtgccctc cagcagcttg ggcacccaga cctacatctg 720
caacgtgaat cacaagccca gcaacaccaa ggtggacaag aaagttgagc ccaaactctg 780
tgacaaaact cacacatgcc caccgtgccc agcacctgaa ctccctggggg gaccgtcagt 840
cttctctctt ccccaaaaac ccaaggacac cctcatgata tcccggacct ctgaggtcac 900
atgctgtgtg gtggacgtga gccacgaaga ccctgaggtc aagttcaact ggtacgtgga 960
cggcgtggag gtgcataatg ccaagacaaa gccgcgggag gagcagtaca acagcacgta 1020
ccgtgtgtgc agcgtcctca ccgtcctgca ccaggactgg ctgaatggca aggagtacaa 1080
gtgcaagggt tccaacaaag ccctcccagc ccccatcgag aaaaccatct ccaaagccaa 1140
aggcgagccc cgagaaccac aggtgtacac ctgcgcccca tcccgggatg agctgaccaa 1200
gaaccagggt agcctgacct gcctggtcaa aggtctctat cccagcgaca tcgctgtgga 1260
gtgggagagc aatgggcagc cggagaacaa ctacaagacc acgcctcccg tgctggactc 1320
cgacggctcc ttcttctctt acagcaagct caccgtggac aagagcaggt ggcagcaggg 1380
gaacgtcttc tcatgtctcg tgatgcatga ggctctgcac aaccactaca cgcagaagag 1440
cctctccctg tctccgggta aatgagtgcg acggccggca agcccccgct ccccgggctc 1500
tcgcggtcgc acgaggatgc ttggcacgta ccccggtgtac ataactcccc ggcgcccagc 1560
atggaaaata agcaccacgc gctgccctgg gccctgcg 1599

```

<210> 33
 <211> 565
 <212> DNA
 <213> Homo sapiens

<220>
 <223> S100 calcium-binding protein A9 (S100A9);
 calgranulin B (CAGB); migration inhibitory
 factor-related protein 14 (MRP-14)

<400> 33
 aattcgctcg gctttgacag agtgcaagac gatgacttgc aaaatgtcgc agctggaacg 60
 caacatagag accatcatca acaccttcca ccaatactct gtgaagctgg ggcacccaga 120
 caccctgaac cagggggaat tcaaagagct ggtgcgaaaa gatctgcaaa attttctcaa 180
 gaaggagaat aagaatgaaa aggtcataga acacatcatg gaggacctgg acacaaatgc 240
 agacaagcag ctgagcttcg aggagtcat catgctgatg gcgaggctaa cctgggcctc 300
 ccacgagaag atgcacgagg gtgacgaggg ccctggccac caccataagc caggcctcgg 360
 ggagggcacc ccctaagacc acagtggcca agatcacagt ggccacggcc atggccacag 420
 tcatggtggc cacggccaca ggccactaat caggaggcca ggccaccctg cctctacca 480
 accagggcc cggggcctgt tatgtcaaac tgtcttggct gtggggctag gggctggggc 540
 caaataaagt ctcttcctcc aagct 565

<210> 34
 <211> 952
 <212> DNA
 <213> Homo sapiens

<220>
 <223> nicotinamide N-methyltransferase (NNMT)

<400> 34
 tgaactctgg atgctgttag cctgagactc aggaagacaa cttctgcagg gtcactccct 60
 ggcttcttga ggaaagagaa ggagggcagt gctccagtgg tacagaagtg agacataatg 120
 gaatcaggct tcacctccaa ggacacctat ctaagccatt ttaaccctcg ggattaccta 180
 gaaaaatatt acaagtttgg ttctaggcac tctgcagaaa gccagattct taagcacctt 240
 ctgaaaaatc ttttcaagat attctgccta gacggtgtga agggagacct gctgattgac 300
 atcggtcttg gcccactat ctatcagctc ctctctgctt gtgaatcctt taaggagatc 360
 gtcgtcactg actactcaga ccagaacctg caggagctgg agaagtggct gaagaaagag 420
 ccagaggcct ttgactggtc ccagtggtg acctatgtgt gtgatcttga agggaacaga 480
 gtcaagggtc cagagaagga ggagaagttg agacaggcgg tcaagcaggt gctgaagtgt 540
 gatgtgactc agagccagcc actgggggcc gtccccttac ccccggtga ctgctgctc 600
 agcacactgt gtctggatgc cgctgcccc gacctccca cctactgcag ggcgtcagg 660
 aacctcggca gcctactgaa gccagggggc ttcttggtga tcatggatgc gctcaagagc 720
 agctactaca tgattggtga gcagaagttc tccagcctcc ccctgggccg ggaggcagta 780
 gaggtgctg tgaagaggc tggctacaca atcgaatggt ttgaggtgat ctgcgaaagt 840
 tattcttcca ccatggccaa caacgaagga cttttctccc tgggtggcgag gaagctgagc 900
 agacccctgt gatgcctgtg acctcaatta aagcaattcc tttgacctgt ca 952

<210> 35
 <211> 4466
 <212> DNA
 <213> Homo sapiens

<220>
 <223> lymphocyte G0/G1 switch regulatory protein 2
 (GOS2)

<400> 35
 tctagatctc tagtctataa gaccagagga gacagtggct acacatataa atttcagtgt 60
 cttccactga tatccgagt ataagcaact tcctttctaa aattatgaaa gtaactaagg 120
 gtctaaaaaa aatttctagt gcggtagtct taaaactaca aatagttttg tcatatctcc 180

tatgatgact	ccctcccttc	agctgcctgg	agcccagggg	tgggcagtga	ctttgtgtag	240
gcagcaagca	gccggttaaca	aaataataat	tattattgtt	attattatat	tataataatt	300
gtaacaataa	caattattat	tgaagctcat	ttacaactaa	ccatccaaaa	gacctctttc	360
ccctgtgtct	tcaatcccca	aggcagaggg	gtagggacag	ttctatccct	cctctgcact	420
taacccttga	aacacatgca	cccctttgtg	actttaccct	ctgcagatgg	ctctgaatgt	480
cttaatgtct	gagagaaagg	gatttagaaa	gcaaaatata	aaaattttta	actagtcctt	540
cctaccttcc	tagaagtggc	aagagttaaa	tggtgagata	gactcaaggg	taggatgact	600
atctcagttt	gcctggaagt	gtttcagttt	gcctggaagt	atctcagttt	tagtgctcag	660
tttttagcagg	agtcctgcat	ttcagagaa	ccctcaaccc	tgagcaaaat	aagatggttg	720
gtcacccctat	ggcttggttt	gaccatcatc	gctataacct	gtatcttacc	tgcatgcatg	780
acacaacaca	gtgctttact	tccctaaaaa	tgacatcagc	cccactaaaa	tatatgttta	840
gtttccaagc	cctacctagt	caccttctac	cctaggagcc	aggttctctt	ttcccaccca	900
gacagaggag	ctgcactcag	aaattcctag	acatgagtta	acactggatt	ccttagcctt	960
ctactcccat	catctcctgc	tcagccccag	ctaccaccta	aactaggaag	atcaagtcta	1020
ccagtgaact	ccgtccatgg	cacttgctgc	ccctcctctg	tccagctctt	accaatatag	1080
ctgctggaac	ctggagggtca	aagtcaaatt	atcaaaaaaa	ggaactgagc	tggtgatgtg	1140
cactaacaca	gcaaatcaca	ggaaagggga	acccaggtaa	attacagcct	tctgacctag	1200
gaagacgtgt	ggtttgcgtc	tctgagttac	agaaacacag	gaaatgctta	ctggaccagt	1260
caatttcaga	atcttggtgc	ccaagctagg	ctgactcacc	ttcagaatgg	aaaccacgtg	1320
acagccctta	tatcagggca	cacatcacat	gctcttccag	aagtcaatgg	gtttggaacc	1380
ctcacagata	ttgggaaagc	tcactaatca	tttttgccag	ttatcagagg	ttgctctgaa	1440
actataagga	agattcaaag	aaaatgccaa	gactgatatt	aaacttggca	ggaacccttg	1500
ttacagaatt	ttcctgcctg	acaaggttaa	aagaacaata	agcaggaaac	acagtcctcc	1560
aggaataatc	aattctattt	ggcccctggg	caccttcact	cagactaaat	tctaaaacat	1620
agaatttcaa	ataagctatt	tagataacct	tgaccattct	ccacacacaa	gcccttgcc	1680
gaactattaa	tagtcaaggc	aaagggtagt	tgttattgct	gcctttttta	actgaatcat	1740
ctgagaaatt	gcttcagacc	cccaaagaaa	gattactgtt	aacaattcaa	aaactaaaat	1800
atctgatccc	tgagacagcc	ttttccccc	acccgccctt	cagggtctag	tccgaccgac	1860
tgcaaaggct	gttgcaagat	tgcatcactg	acctttgcaa	ttttctggcc	agtttgattc	1920
cccttctttc	ccctgcccc	tccctttctc	tgcttaaagg	cctttggcca	atttgccctt	1980
ctttttcccc	aagtttgcta	accctttggc	caatttgctc	ctctttttcc	ccaagtttgc	2040
taactctagc	atatccataa	ccaaagccaa	acattgaacg	tccctcagcc	ccagtgatt	2100
acagctaacc	ctggtcaaaa	tcaatcctac	atcttcacac	gtccaagagt	actcacactc	2160
tggtattctta	cctaagctgt	ctactacacg	cccttctgcc	cacaaactgc	ttcaaagctg	2220
aagttgagct	ggagcagtg	agttgtaccc	ccaaaccag	gagggtggca	gagaattatt	2280
gaggagagca	tgaaataact	ccattctaaa	atggcaagat	gaacttctac	caacagcccc	2340
ttccataact	gacccctac	ccccaaagtc	ccaactccac	ttctcaagt	gaagtgagaa	2400
caatttgaat	ttgaaggctc	ttccctgata	cacggaagta	cataaggaaa	cagctcgag	2460
gcaaagagac	taatctctct	ctctctctct	ctctctctct	ctctctctct	ctcacacaca	2520
cacacacaca	cacacacaca	cacacctctg	tgcataaaa	caccatcaat	gaatagtttt	2580
ctatcaactg	actctagtta	tacatgcatg	tacctctaaa	taaaaccaac	caggcaggaa	2640
agaaacaata	ttagcacata	ttgctttatc	caagcgtaac	ctgttctgtc	ctgttaccba	2700
gatccctccc	ccttgccctc	tccctctctg	tccattgcca	cacacgtggg	aaggtgacaa	2760
cccttccgaa	taaaaatgaa	agctttcttc	tttagatgga	acccccaaat	tccctcatta	2820
tttataatgt	caggctgtcc	tggaacaagg	aagctgtgca	cccgtgaca	ccagtaagaa	2880
ggttgccgcc	atgtcagaga	tgtccgcgga	cacctccctg	ggctccgggt	cctcccctgc	2940
gctcgctgg	agtgggacct	tgcgctgcac	actggccttc	ccacgcgccc	cgctgcgatg	3000
gcacccgcgc	cgggccccct	agctcacaca	gtcggagcgt	gctcagcgcg	tgccacctc	3060
ttgccaggtc	ccagccgggt	tccaccccc	ccttttcccc	tctcttctt	cctccccctc	3120
cgagttcccc	tggtctgtac	cgcgctggcc	tgggcccgag	agcccaggag	gcgtgtctca	3180
gagaaaagat	ataagcggcc	cccggacgct	aaagcggtgc	cagcggcgga	gtctccaact	3240
gggagagctg	cagctgccga	gaggaggaga	acgctgaggt	cggtcggacc	aacggacgcg	3300
ctgaccgctg	ccaactgcag	ctcgcgctgc	ctcctgctcg	cgcgctgcca	ctaaggtagt	3360
ccgcctttct	atgagccctc	cccaagatta	gctgggtgcg	gggtgggtggg	agccgttctt	3420
tggtggctga	agccctctc	ctgctgctcc	tctgacaggt	cattcccgc	tccgagagcc	3480
cagagccgag	atggaaacgg	tccaggagct	gatccccctg	gccaaggaga	tgatggccca	3540
gaagcgcaag	gggaagatgg	tgaagctgta	cgtgctgggc	agcgtgctgg	ccctcttcgg	3600
cgtgggtgctc	ggcctgatgg	agactgtgtg	cagccccctc	acggccgcca	gacgtctgcg	3660
ggaccaggag	cagcgctggg	cggagctgca	ggccgcctg	gagcgacagg	ctctccagaa	3720
gcaagccctg	caggagaaag	gcaagcagca	ggacacgggc	ctcggcgccc	gggcccctgtc	3780
caaccggcag	cacgcctcct	aggaactgtg	ggagaccagc	ggagtgggag	ggagacgcag	3840

tagacagaga	cagaccgaga	gaggaagggga	gagacagagg	gggcgcgcgc	acaggagcct	3900
gactccgctg	ggagagtgc	ggagcacgtg	ctgtttttta	tttgactta	acttcagaga	3960
aaccgctgac	atctagaact	gacctaccac	aagcagccac	caaaggagtt	tgggattgag	4020
ttttgctgct	gtgcagcact	gcattgtcat	gacatttcca	acactgtgtg	aattatctaa	4080
atgcgtctac	cattttgcac	tagggaggaa	ggataaatgc	tttttatgtt	attattatta	4140
attattacaa	tgaccaccat	tttgcatttt	gaaataaaaa	actttttata	ccatatctca	4200
tgtaattcct	gagaggtgtg	gtgtcctggg	gtgggaagca	gggagggtga	gcagggtggg	4260
gatggtgatg	ggttcttacc	tgagcactgc	agaggagca	gcttcctgag	ggtcagacac	4320
ttgcttcaca	cctaggaact	gtgtaataag	ttactacatg	catataagtc	tgttgaggac	4380
ttgtttttcc	ttcttgttag	gggtgggaag	agagaaaatt	ttataacttc	cgtgagattt	4440
agcattttta	catcaaaag	tagatc				4466

<210> 36

<211> 439

<212> DNA

<213> Homo sapiens

<220>

<223> S100 calcium-binding protein P (S100P);
migration-inducing gene 9

<400> 36

ggtgggtctg	aatctagcac	catgacggaa	ctagagacag	ccatgggcat	gatcatagac	60
gtcttttccc	gatattcggg	cagcgagggc	agcacgcaga	ccctgaccaa	gggggagctc	120
aaggtgctga	tggagaagga	gctaccaggc	ttcctgcaga	gtggaaaaga	caaggatgcc	180
gtggataaat	tgtcaagga	cctggacgcc	aatggagatg	cccaggtgga	cttcagttag	240
ttcatcgtgt	tctgtgctgc	aatcacgtct	gcctgtcaca	agtactttga	gaaggcagga	300
ctcaaataat	gccttgagga	tgtcacagat	tcctgcagag	ccatggtccc	aggcttccca	360
aaagtgtttg	ttggcaatta	ttcccctagg	ctgagcctgc	tcatgtacct	ctgattaata	420
aatgcttatg	aaaaaaaa					439

<210> 37

<211> 565

<212> DNA

<213> Homo sapiens

<220>

<223> annexin V, annexin 5, annexin A5 (ANX5, ANXA5); lipocortin V;
endonexin II; anchorin CII; placental anticoagulant protein I
(PAP-I); vascular anticoagulant-alpha (VAC-alpha);
calphobindin; anticoagulant protein 4

<400> 37

tggagggttaa	tggaatacat	ttggtttctg	ggagatacat	ctgggggacta	taagaaagct	60
cttctgctgc	tctgtggaga	agatgactaa	cgtgtcacgg	ggaagagctc	cctgctgtgt	120
gcctgcacca	ccccactgcc	ttccttcagc	acctttagct	gcatttgtat	gccagtgttt	180
aacacattgc	cttattcata	ctagcatgct	catgaccaac	acatacacgt	catagaagaa	240
aatagtgggtg	cttcttttctg	atctctagtg	gagatctctt	tgactgctgt	agtactaaag	300
tgtacttaat	gttactaagt	ttaatgcctg	gccattttcc	atttatatat	atttttttaag	360
aggctagagt	gcttttagcc	ttttttaaaa	actccattta	tattacattt	gtaaccatga	420
tacttttaatt	agaagcttag	ccttgaaatt	gtgaactctt	ggaaatgtta	ttagtgaagt	480
tcgcaactaa	actaaacctg	taaaattatg	atgattgtat	tcaaaaagatt	aatgaaaaat	540
aaacatttct	gtccccctga	attat				565

<210> 38

<211> 3678

<212> DNA

<213> Homo sapiens

<220>

<223> hypoxia-inducible factor 1 alpha (HIF1A, HIF-1
alpha); basic-helix-loop-helix-PAS protein MOP1;
ARNT interacting protein

<400> 38

gtgaagacat	cgcgggggacc	gattcaccat	ggagggcgcc	ggcgggcgca	acgacaagaa	60
aaagataagt	tctgaacgtc	gaaaagaaaa	gtctcgagat	gcagccagat	ctcgggcgaag	120
taaagaatct	gaagtttttt	atgagcttgc	tcacagttg	ccacttccac	ataatgtgag	180
ttcgcatctt	gataaggcct	ctgtgatgag	gcttaccatc	agctatttgc	gtgtgaggaa	240
acttctggat	gctggtgatt	tggatattga	agatgacatg	aaagcacaga	tgaattgctt	300
ttatttgaaa	gccttggatg	gttttgttat	ggttctcaca	gatgatggtg	acatgattta	360
catttctgat	aatgtgaaca	aatacatggg	attaactcag	tttgaactaa	ctggacacag	420
tgtgtttgat	tttactcatc	catgtgacca	tgaggaaatg	agagaaatgc	ttacacacag	480
aaatggcctt	gtgaaaaagg	gtaaagaaca	aaacacacag	cgaagctttt	ttctcagaat	540
gaagtgtacc	ctaactagcc	gaggaagaac	tatgaacata	aagtctgcaa	catggaaggt	600
attgcactgc	acaggccaca	ttcacgtata	tgataccaac	agtaaccaac	ctcagtgtgg	660
gtataagaaa	ccacctatga	cctgcttggg	gctgatttgt	gaaccattc	ctcaccctac	720
aaatattgaa	attccttttag	atagcaagac	tttcctcagt	cgacacagcc	tggatatgaa	780
attttcttat	tgtgatgaaa	gaattaccga	attgatggga	tatgagccag	aagaactttt	840
aggccgctca	atttatgaat	attatcatgc	tttggactct	gatcatctga	ccaaaactca	900
tcattgatga	tttactaaag	gacaagtcac	cacaggacag	tacaggatgc	ttgccaaaag	960
aggtggatat	gtctgggttg	aaactcaagc	aactgtcata	tataacacca	agaattctca	1020
accacagtgc	attgtatgtg	tgaattacgt	tgtgagtggg	attattcagc	acgacttgat	1080
tttctccctt	caacaaacag	aatgtgtcct	taaaccgggt	gaatcttcag	atatgaaaat	1140
gactcagcta	ttcaccaaag	ttgaatcaga	agatacaagt	agcctctttg	acaaacttaa	1200
gaaggaacct	gatgctttta	ctttgctggc	cccagccgct	ggagacacaa	tcatatcttt	1260
agattttggc	agcaacgaca	cagaaaactga	tgaccagcaa	cttgagggaag	taccattata	1320
taatgatgta	atgctccctt	cacccaacga	aaaattacag	aatataaatt	tggcaatgtc	1380
tccattacc	accgctgaaa	cgccaaagcc	acttcgaagt	agtgtctgacc	ctgcactcaa	1440
tcagaagatt	gcattaaaat	tagaaccaaa	tccagagtca	ctggaacttt	cttttaccat	1500
gccccagatt	caggatcaga	cacctagtcc	ttccgatgga	agcactagac	aaagttcacc	1560
tgagccta	agtcccagtg	aatattgttt	ttatgtggat	agtgatatgg	tcaatgaatt	1620
caagttggaa	ttggtagaaa	aacttttttg	tgaagacaca	gaagcaaaga	acccattttc	1680
tactcaggac	acagatttag	acttggagat	gttagctccc	tatatcccaa	tggatgatga	1740
cttccagtta	cgttccttcg	atcagttgtc	accattagaa	agcagttccg	caagccctga	1800
aagcgcaagt	cctcaaagca	cagttacagt	attccagcag	actcaaatac	aagaacctac	1860
tgcta	accactacca	ctgccaccac	tgatgaatta	aaaacagtga	caaaagaccg	1920
tatggaagac	attaaaatat	tgattgcata	tccatctcct	acccacatac	ataaagaaac	1980
tactagtgcc	acatcatcac	catatagaga	tactcaaagt	cggacagcct	caccaaacag	2040
agcaggaaaa	ggagtcatag	aacagacaga	aaaatctcat	ccaagaagcc	ctaactgttt	2100
atctgtcgct	ttgagtcaaa	gaactacagt	tcctgaggaa	gaactaaatc	caaagatact	2160
agctttgcag	aatgctcaga	gaaagcgaaa	aatggaacat	gatggttcac	tttttcaagc	2220
agtaggaatt	ggaacattat	tacagcagcc	agacgatcat	gcagctacta	catcactttc	2280
ttggaaacgt	gtaaaaggat	gcaaatactag	tgaacagaat	ggaatggagc	aaaagacaat	2340
tatttttaata	ccctctgatt	tagcatgtag	actgctgggg	caatcaatgg	atgaaagtgg	2400
attaccacag	ctgaccagtt	atgattgtga	agttaatgct	cctatacaag	gcagcagaaa	2460
cctactgcag	ggtgaagaat	tactcagagc	tttggatcaa	gttaactgag	ctttttctta	2520
atttcattcc	tttttttggg	cactgggtggc	tcactaccta	aagcagtcta	tttataattt	2580
ctacatctaa	ttttagaagc	ctggctacaa	tactgcacaa	acttggttag	ttcaattttt	2640
gatccctttt	ctacttaatt	tacattaatg	ctctttttta	gtatgttctt	taatgctgga	2700
tcacagacag	ctcattttct	cagttttttg	gtatttaaac	cattgcattg	cagtagcatc	2760
attttaaaaa	atgcaccttt	ttattttatt	atttttggct	aggaggttta	tccctttttc	2820
gaattatttt	taagaagatg	ccaatataat	ttttgtgaag	aggcagtaac	ctttcatcat	2880
gatcataggc	agttgaaaaa	tttttacacc	ttttttttca	cattttacat	aaataataat	2940
gctttgccag	cagtacgtgg	tagccacaat	tgacacaatat	attttcttaa	aaaataaccag	3000
cagttactca	tggaaatata	tctgcgttta	taaaactagt	ttttaagaag	aaattttttt	3060
tggcctatga	aattgttaaa	cctggaacat	gacattgtta	atcatataat	aatgatctct	3120
aaatgctgta	tgggtttatta	tttaaatggg	taaagccatt	tacataatat	agaaagatat	3180
gcataatctt	agaaggtatg	tggcattttat	ttggataaaa	ttctcaattc	agagaaatca	3240
tctgatgttt	ctatagtcac	tttgccagct	caaaagaaaa	caatacccta	tgtagttgtg	3300

```

gaagtttatg ctaatatgt gtaactgata ttaaacctaa atgttctgcc taccctgttg 3360
gtataaagat attttgagca gactgtaaac aagaaaaaaa aaatcatgca ttcttagcaa 3420
aattgcctag tatgttaatt tgctcaaaat acaatgtttg attttatgca ctttgctcgt 3480
attaacatcc tttttttcat gttagattca ataattgagt aatttttagaa gcattatatt 3540
aggaatatat agttgtcaca gtaaatatct tgttttttct atgtacattg taaaaatttt 3600
tcattccttt tgctctttgt gggtggatct aacactaact gtattgtttt gttacatcaa 3660
ataaacatct tctgtgga 3678

```

```

<210> 39
<211> 1910
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> nuclear factor of interleukin 6 (NF-IL6);
interleukin 6-dependent DNA-binding protein;
transcription factor 5

```

```

<220>
<221> modified_base
<222> (1)..(1910)
<223> n = g, a, c or t

```

```

<400> 39
gtccttcgcg tcccggcggc gcggcggagg ggccggcgtg acgcagcggg tgctacgggc 60
cgcccttata aataaccggg ctccaggagaa acttttagcga gtcagagccg cgcacgggac 120
tggaagggg acccaccoga ggggtccagcc accagccccc tactaatag cggccacccc 180
ggcagcggcg gcagcagcag cagcgacgca gcggcgacag ctccagagcag ggaggccgcg 240
cacctgcggg ccggccggag cgggcagccc caggcccccct ccccgggcac ccgcgttcat 300
gcaacgcctg gtggcctggg acccagcatg tctccccctg ccgcgcgcgc cgctgcctt 360
taaatccatg gaagtggcca acttctacta cgaggcggac tgcttggtg ctgcgtacgg 420
cggcaaggcg gcccccgcgg cgcggccgac ggccagaccc gggcgcgcgc ccccgccggg 480
cgagctgggc agcatcggcg accacgagcg cgccatcgac ttcagcccg acctggagcc 540
gctgggcgcg ccgcaggccc cgggcgcgcg caccggccac gacaccttc aggcggctcc 600
gcccgcgccc gcccccgcgc ccgcctctc cgggcagcac caccacttc tctccgacct 660
cttctccgac gactacgggg gcaagaactg caagaagccg gccgagtac gctacgtgag 720
cctggggcgc ctgggggctg ccaagggcgc gctgcacccc ggctgcttc cgccttgca 780
cccaccgccc ccgcgcgcgc cgcgcgcgc cgagctcaag gcggagccgg gcttcgagcc 840
cgcggaactg aagcgaagg aggagggcgg ggcgcggggc ggcggcgcag gcatggcggc 900
gggcttccc tacgcgtgc gcgttacct cggctaccag gcggtgccga gcggcagcag 960
cgggagcctc tccacgtcct cctcgtccag ccgcggcgcc acgcgcgagc ccgctgacgc 1020
caaggccccc ccgaccgct gctacgcggg ggccggggcg gcgcctcgc aggtcaagag 1080
caaggccaag aagaccgtgg acaagcacag cgacgagtag aagatccggc gcgagcgcga 1140
caacatcgcc gtgcgcaaga gccgcgacaa ggccaagatg cgcaacctgg agacgcagca 1200
caaggtcctg gagctcacgg ccgagaacga gcggctgcag aagaaggtgg agcagctgtc 1260
gcgcgagctc agcacctgc ggaacttggt caagcagctg cccgagcccc tgctcgcctc 1320
ctccggccac tgctagcgcg gccccgcgg cgccccctg ggccggcgcc gggctgagac 1380
tccggggagc gcccgcgccc gcgcctcgc ccccncccc nnnccgcaa aactttggca 1440
ctggggcact tggcagcngg ggagcccgtc ggtaatttta atattttatt atatatatat 1500
atctatatat tgccaaccaa ccgtacatgc agatggctcc cgcccggtgt gtataaagaa 1560
gaaatgtcta tgtgtacaga tgaatgataa actctctgct ctccctctgc cctctccag 1620
gcccggcggg cggggccggg ttcgaagttg atgcaatcgg tttaaacatg gctgaacgcg 1680
tgtgtacacg ggactgacgc aaccacgtg taactgtcag ccgggcccct agtaatcgct 1740
taaagatgtt ctagggttg ttgctgttga tgttttgttt tgttttgttt tttggctctt 1800
ttttgtatta taaaaataa tctatttcta tgagaaaaga ggcgtctgta tattttggga 1860
atcttttccg tttcaagcaa ttaagaacac ttttaataaa cttttttttg 1910

```

```

<210> 40
<211> 774
<212> DNA
<213> Homo sapiens

```

<220>
 <223> suppressor of mif two 3 homolog 2 (SMT3H2, HSMT3)
 precursor; MIF2 suppressor; small
 ubiquitin-related modifier 2 (SUMO2); sentrin 2

<220>
 <221> modified_base
 <222> (1)..(774)
 <223> n = g, a, c or t

<400> 40
 cggcacgagg gtgctgcttg tgtgctcggt tgggtgcggac ctggtacctc ttyttgtgaa 60
 gcggcagctg aggagactcc ggcgctcgcc atggcgcgacg aaaagcccaa ggaaggagtc 120
 aagactgaga acaacgatca tattaatttg aagggtggcg ggcaggatgg ttctgtggtg 180
 cagtttaaga ttaagaggca tacaccactt agtaaactaa tgaaagccta ttgtgaacga 240
 cagggattgt caatgaggca gatcagattc cgatttgacg ggcaaccaat caatgaaaca 300
 gacacacctg cacagttgga aatggaggat gaagatacaa ttgatgtgtt ccaacagcag 360
 acgggagggtg tctactgaaa agggaacctg cttctttact ccagaactct gttctttaaa 420
 gaccaagatt acattctcaa ttagaaaact gcaatttggt tccaccacat cctgactact 480
 accgtatagt tttctctatt ctttcatttc ccccttcccc attcctttat tgtacataaa 540
 gtaactggta tatgtgcaca agcatattgc attttttttt tttttaacta aacagccaat 600
 ggtatgtttt gattgacatc caagtggaga cgggggatggg gaaaaatact gattctgtgg 660
 aaaatacccc cctttctccc attagtggnc atgtccatt cagcccttaa acctttataa 720
 tcccaggtaa ggtaatttng ccncaccgg ttttaccocaa aaaaaaaaaa actt 774

<210> 41
 <211> 2841
 <212> DNA
 <213> Homo sapiens

<220>
 <223> SWI/SNF related, matrix-associated, actin dependent regulator
 of chromatin, subfamily d, member 1 (SMARCD1); SWI/SNF complex
 60 kDa subunit A; chromatin remodeling complex BRG-1/Brm
 associated factor 60A (BAF60A); Swp73-like protein

<400> 41
 gaattccgcc tatcccatag tctcgctgcc ctgagcctcc cgtgccggcc ggccggccgg 60
 gggaacaggc gggcgccggg gggcgctcgg gggcgggggg gagttccggt tccggttctt 120
 tgtcgggctg catcgcggcg tccgggaaga tggcgggccg ggccgggtttc cagtctgtgg 180
 ctccaagcgg cggcgccgga gcctcaggag gggcgggcgc ggctgctgcc ttgggcccgg 240
 cggaactccg gggcctcctg tgcgaatggg cccggctccg ggtcaagggc tgtaccgctc 300
 cccgatgcc ggagcggcct atccgagacc aggtatgttg ccaggcagcc gaatgacacc 360
 tcagggacct tccatgggac cccctggcta tggggggaac ccttcagtcg gacctggcct 420
 ggcccagtc gggatggatc agtcccgaag gagacctgcc cctcagcaga tccagcaggt 480
 ccagcagcag gcggtccaaa atcgaaacca caatgcaaag aaaaagaaga tggctgacaa 540
 aattctacct caaaggatgc gtgaactggt accagaatcc caggcctata tggatctctt 600
 ggcttttgaa aggaaacttg accagactat catgaggaaa cggctagata tccaagaggc 660
 cttgaaacgt cccattaagc aaaaacggaa gctgcgaatt ttcatttcta acactttcaa 720
 tccggctaag tcagatgccg aggatgggga agggacgggt gcttcctggg agcttcgggt 780
 agaaggacgg ctccctggagg attcagcctt gtccaaatat gatgccacta aacaaaagag 840
 gaagtctctt tcttctttta agtccttggt gattgaactg gacaaagacc tgtatgggcc 900
 agacaacat ctggtagaat ggcacaggac cgccactacc caggagaccg atggcttcca 960
 ggtgaagcgg ccaggagatg tgaatgtacg gtgtactgtc ctactgatgc tggattacca 1020
 gcctccccag tttaaattag acccccgccct agctcgactc ctgggcatcc ataccagac 1080
 tcgtccagt atcatccaag cactgtggca atatattaag acacataagc tccaggaccc 1140
 tcacgagcgg gagtttgtca tctgtgacaa gtacctgcag cagatctttg agactcaacg 1200
 tatgaagttt tcagagatcc ctccagcggt ccatgccttg cttatgccac cagaacctat 1260
 catcattaat catgtcatca gtgttgaccc gaattgatcag aaaaagacag cttgttatga 1320
 cattgatgtt gaagtggatg acaccttgaa gaccgatag aattcttttc tgcgtgccac 1380
 tgccagccaa caggagattg ctactctaga caacaagaca atgactgatg tgggtgggtaa 1440

cccagaggag	gagcgccgag	ctgagttcta	cttccagccc	tgggctcagg	aggctgtgtg	1500
ccgatacttc	tactccaagg	tgcagcagag	acgacaagaa	ttagagcaag	ccctgggaat	1560
ccggaatata	tagggcctct	cccacagccc	tgattcgact	gcaccaattc	ttgatttggg	1620
ccctgtgctg	cctgcctcat	agtatctgcc	ttgggtcttg	ttggggcggt	ccaggggatg	1680
ctgtttggtc	aaggacaaga	ccagaatgaa	gagggcttca	caagacacct	gttatcctct	1740
tctttcaccc	tatctcttcc	cacccccagc	ttccctttgc	cccacaaagt	tcccatgtgc	1800
ctgtaccctc	ccctgggtcta	cataggacct	ctagatagtg	ttagagagag	aacatgtagt	1860
ggtaatgagt	gcttggaatg	gattggcctc	aggccagggtg	gtcttcaagg	ggaccagcta	1920
actgatecta	cccttcagag	accaggaggt	tgggtttcgc	tccttctcca	agactcaggc	1980
ctgtgggcac	tctataagct	agttgatctt	ggctctcctg	ataacagaat	ccaatttctt	2040
tccttccctc	cacaggtttg	gaacaaactc	tcccttcaact	tgttgccctg	tagcactaca	2100
gaaaccctgg	ttcttggtctc	cactgagccc	caggtecagtc	cccagcctct	gggttggcct	2160
gctgtcagtg	cttctctcac	tccttagttg	gggtccacat	cagtattgga	gttttgttct	2220
ttattgctcc	ctcccagaca	ctccctgtgg	ctgccctttg	tgattccctc	agatctgccc	2280
taatcccggt	catttggggtg	ggggaatctt	gcctttccct	ttcagagccc	cagggatctc	2340
atctggggaa	ctgtcattgc	cagcagaggc	tgttccttcc	tgcagtttgg	agatgtgact	2400
cattccattc	actcaactcca	ccctgcctct	gcacccctta	atggagaaac	gggcctaaaa	2460
ccaaacgggt	aaaaaagccc	tgggccatcc	ctgtcttctc	gtcccttgct	tgcccagttg	2520
acacctactg	gtgacttcta	gggcactgag	gagtgaagac	gcctagggct	ggagaatagc	2580
gctgagttgg	gtttgtgact	cttccctctc	cctgcctcac	aggattgtga	ctccccagcc	2640
cctgccttca	aagcttcaga	cccctcaggt	agcagcagga	ccttgtgatc	ttggcccctt	2700
ggatctgaga	tgggtttttgc	atctttccag	gagagcctca	cattcttctt	ccaggttgta	2760
tcacccccga	gttagcatat	cccaggctcg	cagactcaac	acagcaaggg	tgggagacag	2820
ctgggcacaa	aggggggattc	c				2841

<210> 42
 <211> 2444
 <212> DNA
 <213> Homo sapiens

<220>
 <223> NF-kappa-B transcription factor p65 subunit
 (NFKB3); p65delta2; RELA

<400> 42						
ggcacgaggc	ggggccgggt	cgcagctggg	cccgcggcat	ggacgaactg	ttccccctca	60
tcttcccggc	agagcagccc	aagcagcggg	gcatgcgctt	ccgctacaag	tgcgaggggc	120
gctccgcggg	cagcatccca	ggcgagagga	gcacagatac	caccaagacc	cacccccacca	180
tcaagatcaa	tggctacaca	ggaccaggga	cagtgcgcat	ctccctgggtc	accaaggacc	240
ctcctcaccg	gcctcacccc	caogagcttg	taggaaagga	ctgccgggat	ggcttctatg	300
aggctgagct	ctgcccggac	cgtgcacatc	acagtttcca	gaacctggga	atccagtgtg	360
tgaagaagcg	ggacctggag	caggctatca	gtcagcgcat	ccagaccaac	aacaacccct	420
tccaagttcc	tatagaagag	cagcgtgggg	actacgacct	gaatgctgtg	cggctctgct	480
tccaggtgac	agtgcgggac	ccatcaggca	ggccccctcg	cctgcgcgct	gtcctttctc	540
atcccatctt	tgacaatcgt	gcccccaaca	ctgccgagct	caagatctgc	cgagtgaacc	600
gaaactctgg	cagctgcctc	ggtgggggatg	agatcttctt	actgtgtgac	aaggtgcaga	660
aagaggacat	tgaggtgtat	ttcacgggac	caggctggga	ggcccagaggc	tccttttctc	720
aagctgatgt	gcaccgacaa	gtggccattg	tgttccggac	ccctccctac	gcagacccca	780
gcctgcaggc	tcctgtgcgt	gtctccatgc	agctgcggcg	gccttccgac	cgggagctca	840
gtgagcccat	ggaattccag	tacctgccag	atacagacga	tcgtcaccgg	attgaggaga	900
aacgtaaaag	gacatatgag	accttcaaga	gcatcatgaa	gaagagtcct	ttcagcggac	960
ccaccgaccc	ccggcctcca	cctcgacgca	ttgctgtgcc	ttcccgcagc	tcagcttctg	1020
tccccaaagg	agcaccacag	ccctatccct	ttacgtcatc	cctgagcacc	atcaactatg	1080
atgagtttcc	caccatgggt	tttcttctct	ggcagatcag	ccaggcctcg	gccttggccc	1140
cggccccctc	ccaagtccct	ccccaggctc	cagcccctgc	ccctgtctca	gccatgggat	1200
cagctctggc	ccaggcccca	gccccgtgtc	cagtcctagc	cccaggccct	cctcaggctg	1260
tggccccacc	tgcccccaag	cccacccagg	ctgggggaagg	aacgctgtca	gaggccctgc	1320
tgcagctgca	gtttgatgat	gaagacctgg	gggccttgct	tggcaacagc	acagacccag	1380
ctgtgttcac	agacctggca	tccgtcgaca	actccagatt	tcagcagctg	ctgaaccagg	1440
gcatacctgt	ggccccccac	acaactgagc	ccatgctgat	ggagtaccct	gaggctataa	1500
ctcgccctagt	gacagcccag	aggccccccg	accagctcc	tgtccactg	ggggccccgg	1560

```

ggctcccca tggcctcctt tcaggagatg aagacttctc ctccattgcg gacatggact 1620
tctcagccct gctgagtcag atcagctcct aaggggggtga cgcctgccct ccccagagca 1680
ctgggttgca gggattgaag ccctccaaaa gcacttacgg attctggtgg ggtgtgttcc 1740
aactgcccc aactttgtgg atgtcttctt tggagggggg agccatattt tattctttta 1800
ttgtcagtat ctgtatctct ctctcttttt ggaggtgctt aagcagaagc attaaacttct 1860
ctggaaaggg gggagctggg gaaactcaaa cttttccctt gtcctgatgg tcagctccct 1920
tctctgtagg gaactgtggg gtcccccatc cccatcctcc agcttctggt actctcctag 1980
agacagaagc aggctggagg taaggccttt gagcccacaa agccttatca agtgtcttcc 2040
atcatggatt cattacagct taatcaaaat aacgccccag ataccagccc ctgtatggca 2100
ctggcattgt ccctgtgcct aacaccagcg tttgaggggc tgccttcctg ccctacagag 2160
gtctctgccc gctcttttct tgctcaacca tggctgaagg aaacagtgcg acagcactgg 2220
ctctctccag gatccagaag gggtttggtc tggacttctt tgctctcccc tcttctcaag 2280
tgccttaata gtagggtaag ttgttaagag tgggggagag caggctggca gctctccagt 2340
caggaggcat agtttttagt gaacaatcaa agcacttgga ctcttgctct ttctactctg 2400
aactaataaa gctgttgcca agctggacgg cacgagctcg tgcc 2444

```

<210> 43

<211> 1301

<212> DNA

<213> Homo sapiens

<220>

<223> basic transcription element binding protein 2;
transcription factor BTEB2; krueppel-like factor 5
(intestinal) (KLF5, IKLF); similar to colon
Krueppel-like factor (CKLF); GC-box binding protein

<400> 43

```

gggcacgcgc accaccgccc gcagcgcagc ccgcgccccg gcaggccccg cagccggccc 60
agcccgccgc caccggccgc ggctgcctcc agaggacctg gtccagacaa gatgtgaaat 120
ggagaagtat ctgacacctc agcttctctc agttctctata attccagagc ataaaaagta 180
tagacgagac agtgccctcag tcgtagacca gttcttctact gacactgaag ggttacctta 240
cagtatcaac atgaacgtct tcttccctga catcactcac ctgagaactg gcctctacaa 300
atcccagaga ccgtgcgtaa cacacatcaa gacagaacct gttgccattt tcagccacca 360
gagtgaacag actgcccctc tccggccccg acccaggccc tccctgagtt caccagtata 420
ttcagctcac accagaccgc agctccagag gtgaacaata ttttcatcaa acaagaactt 480
cctacaccag atcttcatct ttctgtccct acccagcagg gccacctgta ccagctactg 540
aatacaccgg atctagatat gccagttct acaaatcaga cagcagcaat ggacactctt 600
aatgtttcta tgtcagctgc catggcaggc cttaacacac acacctctgc tgttccgcag 660
actgcagtg aacaattcca gggcatgccc ccttgccatc acacaatgcc aagtcagttt 720
cttcacaaac aggccactta ctttccccg taccaccaa gctcagagcc tggaagtcca 780
gatagacaag cagagatgct ccagaattta accccacctc catcctatgc tgctacaatt 840
gcttctaacc tggcaattca caatccaaat ttaccaccca ccctgccagt taactcacia 900
aacatccaac ctgtcagata caatagaagg agtaaccccg atttggagaa acgacgcctc 960
cactactgcg attaccctgg ttgcacaaaa gtttatacca agtcttctca tttaaaagct 1020
cacctgagga ctcacactgg tgaaaagcca tacaagtgtg cctgggaagg ctgcgactgg 1080
aggttcgcgc gatcggtatga gctgaccgcg cactaccgga agcacacagg cgccaagccc 1140
ttccagtgcg ggggtgtgcaa ccgcagcttc tcgcgctctg accacctggc cctgcatatg 1200
aagaggcacc agaactgagc actgcccgtg tgaccggttc caggtccctt gggctccctc 1260
aatgacaga cctaactatt cctgtgtaaa aacaacaacc c 1301

```

<210> 44

<211> 2346

<212> DNA

<213> Homo sapiens

<220>

<223> guanine nucleotide-binding protein alpha subunit
(GNAS1, Gs alpha); secretogranin VI

<400> 44

```
ctagagttcc ctgattccta aaattattta tcttaaatacc tgtttgcctt aaccttctta 60
aggcatcagc tttgagttac aaatgtaacc aacacacaag caaatgtgcc attgacttag 120
tgctgcataa ctgtgggacg gtcacttccg ttgagcctga ccttgtagag agacacaaat 180
agttggcaaa ttgatgtgag cgctgtgaac accccacgtg tctttctttt tctcccagct 240
tcctggacaa gatcgacgtg atcaagcagg ctgactatgt gccgagcgat caggtgtgca 300
aaacccctcc ccaccagagg actctgagcc ctctttccaa actactccag acctttgctt 360
tagattggca attattactg tttcggttgg ctttgggtgag atccattgac ctcaattttg 420
tttcaggacc tgcttcgctg ccgtgtcctg acttctggaa tctttgagac caagttccag 480
gtggacaaaag tcaacttcca gtaagccaac tgttaccttt ttatataaca gagatcatgg 540
tttcttgaca ttcacccag tccctctgga ataaccagct gtcctcctcc ccaccagcat 600
gtttgacgtg ggtggccagc gcgatgaacg ccgcaagtgg atccagtgtc tcaacggtag 660
gatgctgttg gcttggtgtg tcgtaaagaa cgctttgtct ctgtgttgtt agggatcagg 720
gtcgctgttc acgctcttgg ctttgctctc tttggttaag atgtgactgc catcatcttc 780
gtggtggcca gcagcagcta caacatggtc atccgggagg acaaccagac caaccgctg 840
caggaggctc tgaacctctt caagagcatc tggaacaaca ggtttgtgga gtgaccgcc 900
acccctgcg cttgccagagg aggcctgtgt ctgactgtt tatagagaag aaccccgctc 960
aagcattcca gaccctggc cgaaagcgcg ctctctccaa gcattcacac ggctcctctt 1020
cttgtagatg gctgcgcacc atctctgtga tcctgttctt caacaagcaa gatctgctcg 1080
ctgagaaagt ccttgctggg aaatcgaaga ttgaggacta ctttccagaa tttgctcgct 1140
acactactcc tgaggatggt gtgtatggct tccactcttg ctggctgttc attgcggtgg 1200
ttctttttca aacggtcagg ctgaaaaccc ccattccccct cccaccacca aaccataaag 1260
gatctataag agaagcaaga aaaacgcact ccactaatt ctcatatgga aaaatcaggg 1320
ttttgaagac ttcaggagct acagagatgc tagcaccca gctctgcttg aatttttaaa 1380
tacattaata tgtattccct ttttatatag ctactcccga gcccgagag gaccacgcg 1440
tgaccggggc caagtacttc attcgagatg agtttctggt gagtcgagcc tgtctttagt 1500
ttcctctctt gttcctctc tttttctcat ggatgtaaatt ttacttaatt ccaaattcag 1560
gggttcagct acccagttcc atgggttttag ttcacgcaca tccagtgtgg atttgagctc 1620
tttgcgcccc tcttttttget tttgttttca tatgacatca gaggtgtggt gacagcgtcc 1680
ctggttaggtg tccccatcag ggataggggtg gttcctggcg aggggtgtcac tgacaagtcc 1740
ccttgtttgt gccgcagag gatcagcact gccagtggag atgggcgtca ctactgctac 1800
cctcatttca cctgcgtgtg ggacactgag aacatccgcc gtgtgttcaa cgactgccgt 1860
gacatcattc agcgcagtga ccttcgtcag tacgagctgc tctaagaagg gaaccccaa 1920
atttaattaa agccttaagc acaattaatt aaaagtgaac cgtaattgta caagcagtta 1980
atcacccacc atagggcatg attaacaaag caacctttcc cttccccga gtgattttgc 2040
gaaacccctt tttcccttca gcttgcttag atgttccaaa tttagaaagc ttaaggcggc 2100
ctacagaaaa aggaaaaaag gccacaaaag ttcctctcct ctttcagtaa aaataaataa 2160
aacagcagca gcaaacaaat aaaatgaaat aaaagaaaca aatgaaataa atattgtgtt 2220
gtgcagcatt aaaaaaaatc aaaataaaaa ttaaattgtg gaaagaatg atgggactcc 2280
gtgagttatt tgtggtttga gaaattcgtc attatggttt gatttgtctt aggtaaaagt 2340
ggaggc 2346
```

<210> 45

<211> 41936

<212> DNA

<213> Homo sapiens

<220>

<223> liver-specific bHLH-Zip transcription factor;
B6CBA LISCH7 homolog; lipolysis-stimulated
lipoprotein receptor; chromosome 19-cosmid R30879

<400> 45

```
gatctgcccg ccttggcctc gcaaagtgtc gagagacacc ataccagcc taaagggagc 60
gattctattc tactattctt ctttctgcta atccttccat tctttaattt aataacgaag 120
atTTTTTgag tacctgtcat ataccaggtg ctgttctggg ccctgggaat acagctgtta 180
acaaaatcat caaacactt ccctcgtgga gccacattg cagtgagaga gacaaacacg 240
acacacactc tcaagtcctt gaagataaag aaaactgggt aacggagaga agaggccagg 300
gtttgttcta taatcattaa taacacgagc agtaagaagt aaaatttatc taagtaacaa 360
cttataaagg gtctactgtg tgctaagctc tcatccaggt tccaaggat taactcagac 420
cacacagtaa ttgaatagat tctatcattg tcatcttaca gaggcccaga gagagaaagt 480
```

gacttgcccta	gtgtcatagc	tggtaacggg	gctgggattc	taactcagcc	actttgggtc	540
tagtggccaa	gctcctaate	cctttgcttg	cctagggttg	tccgcagagg	actcacagag	600
gagatggcag	gagtgaactg	caggggcaag	agagcttaat	ggagaaagcc	tgtgacatgc	660
caggaactgc	acacatatte	tcccattgag	tcctctcctc	taccctcctg	acagctgagg	720
cacagagagg	ttaccttggt	caaattgggtg	cataggaagt	caaagtctgg	agctgggggt	780
tgaaccagg	cagccctgag	aaccttggtc	tttttttttg	agacggagtc	tcgctctgtc	840
gcccaggctg	gagtgcagtg	gcgggatctc	ggctcactgc	aactccgcct	ccgggggttc	900
cgccattctc	ctgcctcagc	ctcccaagta	gctgggacta	caggcgcccc	ccactacgcc	960
cggctaattt	tttgtatttt	tagtagagac	gggggtttcac	cgtttttagcc	gggatgggtc	1020
cgatctcctg	acctcgtgat	ccgcccgcct	cggcctccca	aagtgcctgg	attacaggcg	1080
tgagccaccg	cgcccggccc	cttggtctta	actgtaatgc	tgctcctga	taggatgtgc	1140
ctgttgggag	taagtaaggg	gcagtcattc	attcattcat	ttggtattta	tcaagcatcg	1200
actatgtgtc	gttggtgctg	gggatagagg	tgattgggag	ggctgaagtt	tctgtcgtca	1260
aggagatgac	attctggtgg	agtgcagctg	gcagtaataa	agcagataaa	gaaagagtat	1320
gagaatttca	aagtctgggc	acgggtggctc	acgtctgtaa	tctcagcact	ttgggaggcc	1380
aagggtgggtg	gatcacctga	ggtcaggagt	tccagaccag	cctggccaac	atgggtgaaac	1440
cccgtctcta	ctaaaaatac	aaagattagc	caggcatggg	ggcacatgcc	tgtaatccca	1500
gctactcagg	aggctgaggc	atgagaatcg	cttgaaccca	ggaggcagag	gttgacgtga	1560
gctgagatcg	caccactgta	ctgcagctcg	ggcgacagag	tgagactctg	tctcaaaaaa	1620
aaaaaaaaaa	aaaaagactc	cgtcaaggta	taagaatgtc	agagagtact	aagtgttgca	1680
aagaaaaata	caccaggctg	ggtgcattgg	ctcatggcctg	taaatttcag	cactttggga	1740
ggcaagggca	ggaggtacac	ttgagcctag	gagtttgaga	ccagcctgga	caacaaaatg	1800
agaccccatg	tctacaaaaa	ttttaaaaaa	ttaaaaatta	gctgggcatg	gtggcattgtg	1860
cctgtgggtc	cggtgctca	ggaggctgag	gtgggaggat	tgcttgggct	tgagaggtca	1920
aggcttcagt	gagtcattgat	cgtgccactg	cattccagcc	tgggtgacag	agtgcagacc	1980
tgtcttgaaa	tgaaaagaaa	ataggctggg	cgcagtggtc	cacacctgta	atcccagcac	2040
tttgggaggc	cgagggtggg	ggatcacctg	aggtcaggag	atcgagacca	gcctggccaa	2100
catggtgaaa	tcccatctct	actaaaaata	caaaatttag	ccgggctgtg	tggtggggcg	2160
ctgtaatccc	agctactcgg	gaggctgagg	caggagaatc	gcttgaacct	gggaggcgaa	2220
ggttgcggtg	cgccaagatt	gcgccactgc	actctagcct	gggaaacagt	gagactccgt	2280
cttaaaaaaa	aaagaaaaaa	gaaaaatagc	ctgggtgatg	tgctacatgg	aatgacttgg	2340
gctgtgaata	tgattttgagg	agggcctggg	cctgggcctt	acagaacctc	gaaggcagag	2400
aggaagggga	ggggcagggt	gccagggatg	aaggctcacg	tacctcatgt	cttagtgtgt	2460
gttactgtc	ttaaacaaga	atttaaagtt	gggcatgggg	cagagcgggg	aaggggagcat	2520
ccctttgcag	accccaagaa	gccagggaact	ggagcacatt	ctgctagagg	atcgatggga	2580
agcagggttc	caggggctga	gcctatgtca	gtcctgtttc	agaggaggca	ccaggcttgc	2640
ttgcctgaa	tttctgtggg	cagctcagcc	atgagcatcc	tactgttatt	gaggtcacag	2700
ggctgcttag	gccccctcct	ctctaaccce	gggattgtgc	ctgcctggac	caggcgtgac	2760
tgctaagctt	ctgccaggac	aagccaaata	ctgaggggtg	ttcctctgct	ggacgcaaaa	2820
gtccaggatg	accccccagg	ctctgtctcg	gggaaggggc	cctgcattgct	ccaggggcct	2880
cacaggcctg	ggtctttcaa	accaccccca	cctgggcctg	tgtttgatca	aggccctgag	2940
tgtaaaccatc	cattgtgtgt	gtcctttcag	gaaatcccat	agccatagga	gcttctctctg	3000
tttcagcttt	gaggatgggg	aaaagtggac	tccccgtggg	gttcctaggg	tcacccactg	3060
tgctgggggt	tttctgttgt	tggtgttttt	tttctgttgc	ccaggctgga	gtgcagtggt	3120
gcaatctcag	ctcactgcaa	cctctgcctc	gcaagttcaa	gtgattctcc	gcctcagcct	3180
cctgagtagc	tgggattaca	ggtgcacacc	accacacctg	gctaattttt	gtatcttttt	3240
ggtagagatg	ggatttcgcc	atggttgcca	ggctggtctc	aaactcctga	cctcagggtga	3300
tctgcctgct	ttggcctccc	aaagtctctg	gattacagat	gtgagccacc	atgcccggcc	3360
tatcctgggt	tcaaaaagtg	aaatagtctt	ggataaggta	gaaggctgtc	cactccaggc	3420
atccctccgg	tccggtggct	cattccctgc	tttgtccttc	catgcttttg	gtgatggacc	3480
agcacctgga	caggaggccc	tgttccacct	cctcgggctc	cttgggggtc	aagtgcctcc	3540
acctccagct	gcactgcagc	agagagccca	tgggacctct	gaaatcatga	aggtcacctt	3600
tgcggtgtat	aaagaaggaa	ccagagggtg	gagatgtgga	ggaggcctgg	ctgctgttcc	3660
cactggagac	ctggcatctt	ctccccgacc	taaaacaatg	aaagcagtgc	tcagcccggg	3720
tgagatcacg	gccagcccaa	gaccaggaac	aggggtacgc	ctgcaggaag	aagggtgtgc	3780
cagaccttag	gatggatcaa	aagaagccgg	aaaactatat	tttttgtgag	ttttgaaaaa	3840
gcagacagg	tcaaacaaaa	cacagtgcag	tccagcctcg	gcctacaaga	tgccagattt	3900
caaccctgg	cctatatgat	ctggttgcca	tggcaggcgg	ttcctgtcca	cctcttttgt	3960
ttatagcagg	gaccagctct	tgagctccag	tgttgaagag	gcacggtcag	ggtctgatct	4020
gaagacactg	gtggctcatg	cctgtaatcc	cagcaactca	ggaggccgag	gcagaggtat	4080
tgcttgagga	caggagctgg	gagaccagcc	tgggcaaac	agtgcagacc	agagactaca	4140

aaaaataaaa	tttagcgggg	catgatggca	caccctgcta	ctctggagat	gggaagattg	4200
cttgagccta	ggagttcgaa	gctgcagtga	cccatgatcg	caccactgca	ctccagcctg	4260
ggcgaccaag	ctaggccctc	tcaaaaaaga	tacaggtgga	aaaatgatgg	acgaagaggg	4320
cattgtggca	aacctgggga	tttaggagaa	cctagtttgg	aattctatga	ggattcaatg	4380
aaagaattgtg	tgtagagggg	cccagcacat	agtaagagct	caataaacgg	tgggggctag	4440
gggcggtggc	tcatgcctgt	aatcccagca	ctttgggagg	ctgaggcagg	tggtacactt	4500
gagccctgga	gttcaagatc	aacctggaca	acaaagcaag	atcccatctc	aaaattaaaa	4560
aacaacacca	acaacaaaaa	aacagtggct	tagatgcctg	atcattaggg	taagtcgtgt	4620
cctcaacccc	ttcacatctg	ctctgaaggt	caccatatcc	ggaagccttc	cctggcctcc	4680
ttgtttaaaa	tggcacagcc	cccactccac	gcctggcact	ctctgctgtc	cctgattcgt	4740
tttctccata	cagcttatct	ttgtctgata	tgtgacatag	ttaacatttt	atattttgtct	4800
ttctttccta	gttagaatct	gaactctaga	agggcaaggg	caaggattta	taactcaaag	4860
gttcggggt	taggcctctt	ttatattctt	gattttgagg	ttaattaaga	gctcaggcct	4920
agcgaggtgg	ctcatgcctg	gaatcccagc	actttgggag	gccaggcg	gcagatcact	4980
tgaggtcagg	agttccagac	ctgcctggcc	aacacagtga	aaaacctgtc	tctactaaaa	5040
atacaaaaat	tagccagtta	tgttggcagg	cgcctataat	cccagctact	caagaggctg	5100
aggcaggaga	atcgcttgaa	cccaggaggc	agaggctgca	gtgagccaag	atcgtgccac	5160
tgcactccag	cctgggcaac	agagcgagac	tccatctcaa	aaaaaaaaaa	aaaattaaga	5220
gctcaaagag	tttgttttca	taggcagcag	aatgagaaaa	gtttacaaaa	tagtttaaat	5280
gacaataaag	tcattataga	ttaacataaa	taaaatacct	tttatgaaaa	aaataatcat	5340
tttctgaaat	cagacaaaac	attgtgaatg	agaaggtggc	atggttttat	ttttttgcaa	5400
gtctccgaag	cctggctgga	tagaagagcc	tggcttctca	gagctgcttc	agtctgttgt	5460
gatatctatt	gtatgtcacg	tagcctctcg	aaaactccac	agttagtatt	gttgggaaaa	5520
taactttgac	ctcaggatct	cctgaaaaacg	tcttggggaa	ccccagggtc	tagaggctgc	5580
agtttgagaa	ctgttgctgt	ggtatcccag	gtgtctcaaa	tactgcctag	aacatagggtg	5640
gtactcagta	attattgttg	aaggatgaat	gaatgaatga	atgaatgaat	gaatgaaaga	5700
aagaaagaaa	tgtgtctttg	aatccagcca	tgtgcccaga	atgatgagac	agatgacaaa	5760
agctaaggga	ctttagcatg	aggagagggg	gttcgtttcc	ttttttttct	tttttttttg	5820
agatggagtc	tcactctact	gcccaggcta	gagtgcagtg	gtgcaatctc	agctcactgc	5880
aatctctgcc	tcttgagttc	aagcaattct	cctgcctcag	cctccagggt	agctgggact	5940
acaggtgcgt	gccaccatgc	ctagctaatt	ttttacattt	ttggtagaga	tggggtttta	6000
ccatgttggc	ggggtcgtc	tggaaactcct	gacctcaagt	gatccacctg	cctcagcctc	6060
ccaaagtgtt	aggattacag	gtgtgagcca	ccatgtccgg	ccaagagggt	gttcatttct	6120
gctccttgcc	aggtattgtg	tcaggcactg	gggaccagc	agtggctgag	acagacaggg	6180
ctctgcctca	cggagcccac	attttcacca	ggcaaaggat	ggtcggcccc	taagctggga	6240
gataagactt	cagcagtttg	gtgggggagc	cgtgggagaa	gccagccca	cagggggaca	6300
gtgcaaactt	agaaccaagg	cgatggcagg	ggtgaggctg	gcacggtagc	tagagaccac	6360
gtcgtgccaa	gggccttggg	gaccatggga	ctatgggacc	ttaggggaag	cgctctggaat	6420
gctgtagcca	gacactgttg	caaggaggat	ttttctgtag	acatgaggcc	ttccttatga	6480
agaaagcaag	ggttctttca	ttcctggggg	tgccagggtg	tgtggactgc	agcacgcgtg	6540
gttgctccgg	tcacagagct	gtcatgcagg	agggcagcgc	gtccttggga	aggtggcagg	6600
caggtcaggc	taggaggaaa	gaggccggg	aggtgagggc	atttctgcc	cgagatgcc	6660
aatgtagcct	acttctgtcc	ccagtggctt	aaggcagagt	tgcctggtag	gtgccctggt	6720
cccaccctgg	tgaaggctg	aaggatattt	attagtgcct	gagaagcaga	gaggaaacag	6780
gatgtgccaa	aacactttga	tggatggtag	agttaacagg	ctccttgcc	gcagctgctt	6840
cagacaagag	cgcccccaag	ccctgggcct	gacctggaat	gtggggatgg	aaggggaggg	6900
ggaggaacca	aggcactggg	agggtaagtc	tctctctccc	acatagacac	accactcct	6960
tatgggtgcc	tgggcatctc	ctggtacct	gaatctggcc	tgtttatctc	cacacccatc	7020
cctggggtct	acactaggcc	ctgtgggtg	cagttcacat	caggggagtt	ctgacttttg	7080
ctctgagagg	tggttcagag	atggctgtaa	gttgagaagc	acagactgct	gggtgtggtg	7140
gttcacgcct	gtaatcccag	cactttggga	ggctgaggtg	ggggtggatc	acctgtggtc	7200
tggagttcaa	aaccaacttg	gtcaacatgg	cgaaactcca	tctctactaa	aaatgcaaaa	7260
attagccagg	tgtggtggca	ggtgcctata	atcccagcta	catgggaggc	tgaggcagga	7320
gaattgcttg	aatctgggag	gcgaagattg	tagtgagccg	agattagtct	gcaccattgc	7380
atgccagcct	gggcaacaag	agtgaactc	cgattcaaac	aaaaaaaaaa	aaaagctggg	7440
catggtggag	tgctgtagt	cctaactact	caggtgggag	gattgcttga	gtccaggagg	7500
ttgaagttgc	agtgggctat	aattacacca	ctgcactcca	gccagggcc	cagagtga	7560
cctgtctct	aaagaaagaa	aaaaaaaaaa	aacctcaggc	tccgaggcca	ccattactgc	7620
tctatactga	agagctgtgc	agcttttcca	gaccgaaat	gtcatccaca	aaacagaagt	7680
gataatgggtc	ctgcctcaca	gacttcttgc	agtagtccag	gtgtttagaa	cggggtgtaa	7740
aaggccgtgt	gcccttggt	ggaatctttg	catatgcatt	tgatcatctg	cagcctgccc	7800

agcccactgc	ttgccccctc	ctgggtgtgc	tgggaagggg	tctttggccc	tccagggggt	7860
aggtgcccc	gcctccaagg	tgccctcacg	ccttttcac	ccgactcaga	tgctgacctg	7920
acctttgacc	agacggcgtg	gggggacagt	ggtgtgtatt	actgctccgt	ggtctcagcc	7980
caggacctcc	aggggaacaa	tgaggcctac	gcagagctca	tcgtccttgg	tgagtgggccc	8040
tgggaagggg	gaggcatggc	ccttcctttt	gtccgcttct	gttctgtctg	ccctccccctg	8100
tgtecgccct	ctgccctcca	gcttacccctc	tgggctctgt	cgctgctctc	gctctcccc	8160
aggctctgcc	agtcacttag	gctccccctgt	gccctgcacc	ccaggcaggg	accactggcc	8220
cacagtgcct	ccaatcaccc	aagccaaact	aagagaagag	tggagacaat	tggagactct	8280
gccttttcaa	agtctcattt	ttaaaaaaaa	tccagacttg	gggtccgggt	gcggtagtct	8340
atgcctgtaa	tcccagcact	ttgggaggcc	gaggcggtg	gatcacttga	ggccaggagt	8400
tcgagactag	cctggccaac	gtggcaaaat	cccgtctcta	taaaaaatat	aaaagccagg	8460
cgtgggtggtg	cacatgcctg	taatcccagt	tactcagaag	gctgaggcat	gaggattgct	8520
tgaacctggg	aggcagagga	tgcaagtaagc	caagatcaag	ccactgcact	ccagcctggg	8580
cgacagagtg	agactctgtc	caaaaaaaaa	aaaaatccag	acgtggtcag	agtcctatggg	8640
cagtgaatga	ggacagttga	tgggtgtgcaa	aatcgaccca	cctcttgcta	catccccaag	8700
gcctcatctc	acccgagtcc	ctcgccaaag	cacagcggtt	ttgccgtgtg	ccctgctggg	8760
atggcgctgc	atggcacaca	cactgtgttaa	gtttgagtgc	agctgaaacg	aagccgattc	8820
cagacaccca	ggggcagggc	ggggtgtccg	tgtggctggg	aggcctcctt	gtgttagggg	8880
gatgttgcca	tcggccagggt	gccctgctgt	aagccaacac	atggagtctt	gtatgacatg	8940
tgctctgcat	gagtgatgcc	gctgggctgt	acactgccat	cttcacatgt	gtgaatgagc	9000
acgtgactgg	ggggtacttg	ggctgcaaga	cagagttcat	gtgtggggga	tggaacacgt	9060
gcaccagtga	cccaggaacc	tctgcctggt	cttcggtaaa	atgcaccatt	tgcatcagca	9120
gttcccaaaa	ttagtctcca	ggtctatttta	cactctaaaa	cattatcgag	ggtctccaag	9180
agcttttgtt	tgtttctgtg	ggttttatgt	ctatctgttg	cttaacatat	taggaattaa	9240
aatggggaga	ttttcctttt	tttttttttt	ttttgagatg	gagtctcggt	ctgtcgccca	9300
ggctggagtg	cagtggctcg	atctcggtct	actgcaagct	tcacctcctg	ggttcacgcc	9360
attctcctgc	ctcagcctcc	caggtagctg	ggactacagg	cacccgccac	cacacccggc	9420
taattttttt	tgtattttta	gtagagactg	ggtttcacca	tgtagccag	gatggtctcg	9480
atctcctgac	ctcgtgatcc	acccacctgg	gcctcccaaa	gtgctgggat	tacaggcatg	9540
agccactgcc	cggccttaaa	atggggagat	ttttcaagcc	caagatacac	aaggaagact	9600
gggcaacatg	gcaagaccct	gactctacaa	aaaattttta	aattaaccag	gcatggtggc	9660
atgcacctgt	gagcccagct	tcttgggagg	ctgaggcagg	agtatcgctt	gcacccagga	9720
ggtcaaggct	gcagttagcc	gtgactatgc	tactgcactc	tagcatgagt	gacagagacc	9780
ctggctcaag	aaacacaaac	acacacacac	acacacacac	gcatatagtc	cattaggcat	9840
cagggcgatg	atggcatcag	ggagcctggg	aaactctact	ggacattcat	gggagaacaa	9900
gtgaaaaagg	caaataacat	cttagtggtta	ttctaaaatt	tcttcttttg	gccttgtgga	9960
caggaccacg	ctttgagagc	tgtgactgac	atgcctctgt	cctgttgcca	gggcctatag	10020
tgccaagtgc	atgagctctg	gggagggcct	cgtgggtgca	gagctgggccc	tgtggaggcc	10080
cctcagacac	aacactgggtg	gggctcagag	ctccaggggc	actcgaggga	agacaagaac	10140
cggtctctgag	atgcgtgaat	gtgacagtgc	atgagtagag	atggagacct	tgtgggtccc	10200
agaaccagga	ctgcatatga	ctttcatatg	tgggtatttt	tgcccttcacg	ggtcccttcc	10260
tgtttttaaaa	aaaatgtgtg	attatgttgt	caacaagagt	ttattcctgt	atattgtggt	10320
aatttgtgtt	cagatttgta	aagtaaaatt	aaacatttcc	agccagggtg	ggtgacacat	10380
gcctgtagcc	ctagctactt	acccagagg	ctgagggtggg	aggatcgctt	gagccacaga	10440
ggttgaagct	gcagttagcc	atgatcacac	ccctgcactc	cagactgggc	gacagagctg	10500
agatcctatt	tcgtgggccc	taggtccctg	tgccctgctg	aacaggacat	ccctatcacc	10560
gtgggttgag	cccttgggg	tgctaagacc	tatgaatgag	ggaaacttag	ggtgcccaag	10620
ctgaggtaga	gccctcagaa	ccccctggga	tttgatttgg	agccctcgtg	gcataacaca	10680
ggtggattat	gcaatgggag	tttcttacct	ataagcacc	acatgtgggc	gggtggaggg	10740
taggagccat	gcactagggc	ttcagccccc	agcccttccc	cgttccaggg	cacaccttgc	10800
acttgccag	cctggagctg	ggctttcggg	ggtggcacag	cctgggctgg	ctctggccag	10860
cataatctgt	ttctcttttg	tccctccagg	gaggacctca	ggggtggctg	agctcttacc	10920
tgggttttcag	gcggggccca	tagaaggta	ggggggtgga	tcctgagttg	ggcttctcgg	10980
gagctcccat	acatcaccta	ctgcttctga	ctctagttag	tatccccctc	ccactaaac	11040
cctgctcact	gtggacccct	cactaacctg	gctgactgt	ggctctgagg	catctagtgg	11100
tctggegtg	ggcctaggct	aggctgggct	gaggagagcc	tggggtgcag	gccagggctc	11160
tgtgactggc	acctgcgggtg	ctcttgaggg	tgtggcgctc	gggcagctgg	ctctctcttt	11220
ggtctggggg	ctgcagtctg	tctccctctg	tgacaggctg	ctcgttttct	gccttgtgtt	11280
ttttgcacct	gggggagggc	cgtaactggg	gaatggccgg	gatggtagaa	tggggaggtg	11340
gctgtgcccc	gcctctggca	caaaaaatcc	agccagggct	gcaggttcct	tggtgagctt	11400
tgcaaatcgt	ccccgacctc	agtgtgggct	ccgcaccatg	taccctgct	gtgccgttag	11460

cctgttccc	tcccaggcct	ccgggctcag	ggcctgttgt	ctttctgcag	actggctctt	11520
cgtggttgtg	gtatgcctgg	ctgccttcc	catcttctc	ctcctgggca	tctgctgggtg	11580
ccagtgtctg	ccgcacactt	gctgctgcta	cgtcagggtg	cctgctgcc	cagacaagtg	11640
ctgctgcccc	gaggcccgta	agtgtcccg	tcagtggccac	cctggtttgg	gcaacatcct	11700
gcatccaagg	gaaggaggtg	gccatccacc	tgccccagg	acagtggcgt	tggctctggag	11760
ggtgtgaatt	tagccagtg	ggagaaagta	ggctgaggag	ggtctgctgt	ttagattgtc	11820
gtttacttcc	tccaactttt	agtttatttt	tatttatgtt	gttcttttct	tttgtaagta	11880
taatccatac	acatggtaaa	aatgtccaac	agtacaagat	actagtcaca	tggagtaaaa	11940
gccctctaaa	aaaaccaa	cttggctagg	cgcagtgtt	acgcctgtaa	tcccagcact	12000
ttgggaggcc	aagacgagtg	gatcacttga	ggtcaggagt	tccagatcag	cctggccaac	12060
atggtaaaa	ccagttctct	actaaaaata	caaaaattag	ctgggcatgg	tggatgcgc	12120
ctgtaatccc	agctactcag	gagactgagg	catgagaatc	gcttaaacc	agaagtgga	12180
ggttgcaagt	agctgagatc	acgccactgc	actccagcct	ggcgacaga	gtgagactct	12240
gtctcaaaaa	aaaaagaaaa	aaaaatgtta	agtgaaaaag	ttaagaaacc	aaacaagggt	12300
tacaacacta	catgatttaa	gcaaaaaaaa	tttttttgt	tttagagaaa	gggtctcatt	12360
ctgtcatcca	ggcagtgcag	tgcgatcata	gctctctgca	gcctcaaact	ccgggttca	12420
agcagtcctc	ccgcctcagc	ctctggagca	gctgggactg	taggcacaca	ccaccatgcc	12480
cagctaattt	tttgattttt	gttttttcta	gagacggggt	ctcagtatgt	tgcccagcct	12540
gatctcaaac	tcttggcctc	aggtgatcct	cccaagtcag	cctcccaaaa	gtgctgggat	12600
tacaggcatg	tgccaccatg	ctggccaatt	tttaaaaatt	ttctgtagag	acagggtctt	12660
gctatgttgc	ccaggtctgt	cttgaactct	tgacctcaag	tgatcctgcc	tcaggctccc	12720
aaagttagtg	gattacaggc	atgaactacc	acacctggcc	ttaaacttaa	gcaaattttt	12780
ttttttttt	ggagacagtt	tcactctgtc	gcccaggctg	gagtaaagtg	gcgtgatctc	12840
tgtcactgc	aacctccgcc	ccccgggtt	aaactattct	cctgcctcag	cctcccgagt	12900
agctgggata	taggcgcctg	ccaccacgcc	tgactaattt	ttgtattttt	agtagagacg	12960
gggttttgcc	atgttggcca	ggctggtctc	gaactcctga	cctcaggcag	tccgctcccc	13020
cgcaccccta	ccttggcctc	ccaaagtgtt	aggactacag	gtgtgagcca	ccatgcctgg	13080
ccaaatttaa	gcaaattgtt	gaaaacacat	acccacagga	atgctgcaca	ttttaccag	13140
ctactatgtc	tagggtcgta	tctagcacac	cagcatggct	actgtggaga	gctgggactg	13200
gatgtgagat	gagagctaaa	ggggaagtaa	gcaaaccaag	caggggaagg	taagagaaga	13260
cagaagacag	agagagagg	acctaactct	atgagaggag	tcagacatgt	gcaattgaaa	13320
aagacttgct	cctgtctctc	ttctgtgaat	gtttgtgaat	atcccaacgg	gacactttca	13380
cagaggagct	gattgacgtg	gtcacagcca	tcagccttgg	gacaccagac	cacagtgtgt	13440
acactaagtg	gcactgatgg	acacttcagc	atccctctag	ctgctgtccc	gtttccctc	13500
ctcggggacc	acagctgttg	ccagtccttg	gtttccttca	ggagggtgtc	tgggtagacc	13560
agcctgtgtg	cacacagtc	aagatacatg	aacagtgaag	tgccaggcaa	tccttgcaag	13620
catgggcagg	tggagagctg	aggcctgctt	gacaccttc	tgtcagaag	cccagtgcgc	13680
agtttccctc	cctagggtct	agtgtcatcc	cctataaaa	ggggcttatg	gcagagctca	13740
ccacactggg	tgcactctgg	gatttggcga	gctcatgtgc	acaccattga	gcatggggcc	13800
caactatat	aaaatatctt	acgtctgtca	gctgctgggc	actgccacta	tcagcctcag	13860
tagtgactga	gggacagggc	accagtgcga	gccctgtg	acacagagt	acccagaga	13920
agcagccttc	cctctctgag	tcctgtttcc	ttctgttag	tcctgacttc	atgggtgtgt	13980
gttagcatta	aggaagtgc	tggctaattt	tatagtcatt	gaagtcagt	gtgtgcaacc	14040
tggttcctca	aaggatcact	tcctgaaaa	aattccactg	ctccctggag	gcttatgcag	14100
gccatcccat	cccctccctc	ttgttgtgtt	cagctgacag	ctttttgtct	agtgcagtaa	14160
tgttaggtcc	atttcacaga	tgggtgcgaa	ccaagtttgc	agtgaaccca	ctaagaccag	14220
agctaggggc	aggactaaat	gctgggtccca	atgccacatt	cccctgtccc	cacaccacat	14280
ttcctccatc	cggagaccct	gttaccceca	cccagggcc	cattaactcc	ctggcagagg	14340
ccctgttaca	tctgctgctg	ccacagcctc	cgcacacct	tcaggaggca	gcagggtccc	14400
ctgctgatga	taaagtgtca	ggctgcctga	gctaataag	gggcttctc	taggctgtgc	14460
acttagtctt	ctgcttccaa	accaaatacag	aggtgaggca	ccctctctgg	gcccactctt	14520
ctcctccatt	ttcctgttgg	ggtoocagg	aggaagccac	ttgcctagg	cccagggaatt	14580
ttgcaagcct	cttgccctag	ggaggaagga	agggaggagg	atcttacctt	gaactgtcaa	14640
gcctagagcc	tgggtgggca	ggcagaaatg	ggtgcagtcc	atgagttaga	aacactagag	14700
gagacacttt	gctgcttggc	cggggcaggc	aagttaattc	ccgaggctcc	tgccactgca	14760
tctcaatctg	gaaggtgacc	aggtgggcag	gacccacgtc	tcccagatga	ctcatttttt	14820
ctagaacagg	ggcttggctg	ccaaagagga	tacttgattt	cggcttgtgg	ggacagtgg	14880
ggacccagca	tctgggcttt	atataaagg	cagctttgtt	gccctgtaaa	cacacagacc	14940
atgggtggcc	acttcttcca	gtaagttagc	tggggagttg	gaagtttagg	taaaaccttt	15000
tgattgacaa	atgttggcga	attaccatgc	tgttaaatga	aacattgttc	tgccaccctg	15060
gggctgtggg	tgcctgcgtg	caccctctga	aaaatcacac	aggaagtggg	gtggggtctc	15120

tgtgaagctg	gtgtccccc	gcctcaggg	tgctgcagaa	atggaatgag	gaccaacagg	15180
gactcagatg	tccaaggaag	ctctacagcg	gagaggacgg	cttggaagg	aggtccaggc	15240
ccaggtccct	ccggaaccca	atgggtatgg	ggcagcctgg	ctcctgcctc	atcccccttc	15300
tctgtttgat	tgtgtcctca	cagtgtatgc	cgccggcaaa	gcagccacct	caggtgttcc	15360
cagcatttat	gccccagca	cctatgcccc	cctgtctccc	gccaagacct	cacccccacc	15420
agctatgatt	cccatgggccc	ctgcctacaa	cggtaccct	ggaggatacc	ctggagacgt	15480
tgacaggagt	agctcaggtg	aggccggggg	aagcagggaac	agctggtggg	agtgtgctgg	15540
gcattctggac	actgaggggc	aggggctgga	aggaagagtg	tcttggggagc	cgaggagggg	15600
ctctgctcct	ggtgcgcggc	cactgacagc	cactctcccc	cagctggtgg	ccaaggctcc	15660
tatgtacccc	tgcttcggga	cacggacagc	agtgtggcct	ctggtgagaa	tccatcgctc	15720
cgaagttaga	tgtgcctgta	agggagaggg	gtgggcccagg	atccatcctc	ccaaaccgac	15780
caccaccccc	ctgtccctag	aagtccgcag	tggtacagag	attcaggcca	gccagcagga	15840
cgactccatg	cggtcctgt	actacatgga	gaaggagctg	gccaacttcg	acccttctcg	15900
acctggcccc	cccagtgggc	gtgtggagcg	gggtaagcag	gagccttggg	gtctgagggc	15960
ttttaagggtg	ggggggtgaa	acatgtctcc	ctgatacctg	ccgcagggac	tcttgggtgca	16020
aaccttgga	cccggtctcc	tccagcagtc	agtgcacccc	cccttccctg	cagccatgag	16080
tgaagtcacc	tccctccacg	aggacgactg	gcatctcgg	ccttcccggg	gccctgccct	16140
caccccgatc	cggtatgagg	agtggggtgg	ccactcccc	cgagtcacca	ggggatggga	16200
ccaggagccc	gccagggagc	aggcaggcgg	gggctggcgg	gccaggcggc	cccgggccccg	16260
ctcctgtggac	gccctggacg	acctcacccc	gccgagcacc	gccgagtcag	ggagcaggtc	16320
tcccacgagt	aatggtggga	gaagccgggc	ctacatgccc	ccgcggagcc	gcagccggga	16380
cgacctctat	gaccaagacg	actcgaggga	cttccccagc	tcccgggacc	cccactacga	16440
cgacttcagg	tctcgggagc	gccctcctgc	cgacccccagg	tcccaccacc	accgtaccgg	16500
ggaccctcgg	gacaacggct	ccaggtccgg	ggacctcccc	tatgatgggc	ggctactgga	16560
ggaggctgtg	aggaagaagg	ggtcggagga	gaggaggaga	ccccacaagg	aggagaggga	16620
agaggcctac	taccgcggcg	cgccgcccc	gtactcggag	accgactcgc	aggcgtcccg	16680
agagcgcagg	ctcaagaagg	tgaggggccg	cctccctggc	gtccagaccg	tccctgggccc	16740
cccagccggt	ccccgcggct	catacccttc	tttctttctc	ccttgcagaa	cttggccctg	16800
agtccggaaa	gttttagtct	ctgatctgac	gttttctacg	tagcttttgt	atTTTTTTTT	16860
ttaatttgaa	ggaacactga	tgaagccctg	ccataccctc	cccagagtcta	ataaaacgta	16920
taatcacaag	ctctggagag	aaccatttgt	tggccgcgc	ggggcggggg	accggggctg	16980
ctcccgatg	cgtctgtaaa	gcgcgcgctc	ccgggggcac	cgagtcctgg	ggccgggagg	17040
aagagaccca	gcctggcccc	gcccgcggcc	cgccgcggcg	ccggagaacg	tgccccgcgc	17100
agccgcggcc	cgctgcgctg	cgccgccccg	ccccgccag	gcgtgcgcat	gcgcggcgcc	17160
cctccgcctt	cgcgccaccg	aggctggccg	tccgggacgc	gcgcgcgctc	ctctccccct	17220
ccagcccatc	ccccccagcc	ccccaccgac	ctactttact	gtctccaaac	tcgggcagcc	17280
cacctggccc	ccgacgaccc	cagcccctgc	accgggtacc	ccgacgttcc	atccagaccc	17340
gcgtttcacc	agggcggcgc	gcggcgacct	cgccgccccg	ggagcccccg	gctcgcgcgc	17400
gcccgcggcg	ccccggagac	agaccagcgc	gcgcgccccg	ggccgcctcc	ccccagcgcg	17460
cgctccggccc	ggggctcgcg	ccgcgcggcg	cgccgcccgc	gcgcgcgcgc	agctcaagta	17520
aaggaggaaa	aaaaaaaggg	ggaaaaatag	aaagcggcgg	cggtgcagc	agcgatccgc	17580
cgccggactg	ggccaagccg	ggcggcggcg	gcgcgagccg	gcgatccagg	gcactggcgg	17640
cggccagcca	gggcggggcg	tgttcaaaaa	aaaaagtgcg	ggcggcggcg	gctgtccagg	17700
gaaggaggcc	tgaggggccg	gtgcagcggg	cgggcagctg	ggtgggctgg	gggcggccgc	17760
gcggcgtccc	ggagcctcgg	gcccgcggga	gccggcgggc	gggcggaggc	ggaggcggcg	17820
gcggctgcag	cggtgcagag	agcggcgggc	gctgcggcgg	cggcggcggc	atctcctcct	17880
cacatgaccc	cactgtttgt	ccccgtgatc	agcgcgagcg	gctcccgat	ctcctccgtc	17940
ccctcctgcc	gcgcggcgtg	agcgcggggc	tccggggccc	cccgcccgcc	cgccccctcc	18000
cctccctccc	tccctccccc	tccctccccc	cccgggcccc	gcgcggcccc	cgcccccgcc	18060
ccccccatgg	acatgctgga	cccgggtctg	gatcccgctg	cctcgccac	cgctgctgcc	18120
gcccgcagg	aagatccccg	gcccggcgct	gccccgcgc	cccgcccccg	gccccggccc	18180
cgcggcctgc	aggccggggc	cgccatgatc	ccgagcggcc	gcgggcccgg	ctcaaaatgg	18240
aggccgcggg	cgcggggggg	acctggcgcc	tcccgcccc	ggcccccgcc	ctcggcggcg	18300
ccccggcct	caggcgcggc	cggtggggac	tggggcccct	cagctggggc	cgggggcggg	18360
ggcgcgggcg	cgggcgcgcg	tgacctgct	ccctcctgtg	cccctggcag	ccacgacaag	18420
ggacccgagg	cggaggaggg	cgtcgagctg	caggaagggt	agtgttgc	gggcggcgcc	18480
cgccccggga	gggtggggg	cgctcggcgc	ggccctgacc	gtgccccgac	cctcctcggc	18540
cccaggcggg	gacggcccag	gagcggagga	gcagacagcg	gtggccatca	ccagcgtcca	18600
gcaggcggcg	ttcggcgacc	acaacatcca	gtaccagttc	cgcacagaga	caaattggagg	18660
acaggtgagc	ggcgggcgcg	gagggcgaa	gggcgggcgg	gcgggcgcgc	cggaaggct	18720
cggacctggc	cccagcgccg	gcctcgcgcg	tctgcgcgcc	cctgcagggt	acataccgcg	18780

tagtccaggt	gactgatggt	cagctggacg	gccagggcga	cacagctggc	gccgtcagcg	18840
tcgtgtccac	cgctgccttc	gcgggggggc	agcaggctgt	gacccaggtg	ggtgtggacg	18900
gggcagccca	gcgcccgggc	cccgcgcgtg	cctctgtgcc	cccaggtcct	gcagcgccct	18960
tcccgtggt	aggtgccctg	ccaccccttg	gtgggggggg	gagggagtgg	agaggggaca	19020
ctggctctgc	tcttggggag	ccccgggggt	ggggcagggtg	tcgcccagcg	gatgtgcct	19080
tcaggcctca	ggctgcatgg	ggccagatcc	ctggtgtgca	ccgtgaaacc	tggggacagt	19140
gctcttgaa	tttttttttc	ccgcaaaatg	ggaatgatgt	gtcttaagag	gaaagtttct	19200
tagagtgcga	aacggatttg	ctcagcaagt	gatcgctgac	ctccccccat	gttccagggc	19260
tgtttgaaac	acaggacaga	atgctacacg	cagaaggagt	ccccactcct	gttaattgca	19320
gagaatgcag	taaaccccaa	gcacagcaat	gaggggacgg	gatggaggaa	cagagaaagc	19380
taagggtagc	ctctgccttc	ctactcccca	ggctgtgatc	caaaatccct	tcagcaatgg	19440
tggcagtcg	gcggccgagg	ctgtcagcgg	ggaggcacga	tttgccctatt	tcccagcgtc	19500
cagtgtggga	gatactacgg	ctgtgtccgt	acagaccaca	gaccagagct	tgcaggctgg	19560
aggtgaggag	tagaagtcag	attggcaggt	gggggaggca	acggggccag	cagggaggga	19620
agccccccca	gccagtctctg	acttcaccct	gccttgccac	taacccccca	ctctccctgc	19680
aggccagttc	tacgtcatga	tgacgcccc	ggatgtgctt	cagacaggaa	cacagaggac	19740
gatcgcccc	cggacacacc	cttactctcc	gtatgtgcag	gggacacctg	gagggcctgg	19800
tgttgaaatg	gaaggaagag	gggtttcttg	agtagaagct	gggcagttag	catgaagtgg	19860
gcacatggtg	taatgttttt	tttctttgcc	tgtttctgct	gctctagtgc	acataaagta	19920
tcatgtcttt	tgtttttgca	gatggattta	ccttgcaaaag	ataattttca	aatctaatac	19980
ttagcagatg	cttgggcaaa	cagctctgcg	ataatacatg	cccccttttt	tttctctcct	20040
ctttagaata	aattgatgga	accagaacac	cccagataga	gaggagaaga	gcccagcaca	20100
acgaaggtga	ggacaaggtg	tggctccggg	tccccctgac	caccaccctc	acaggctcag	20160
ccagccctgg	agtgtggagt	gacagagaga	gaagccactc	ctgggcaggc	cacaagtgtc	20220
ccagagggct	ttgctggacg	ctgtaaaggt	agaaagttag	caacgagggg	agagtacagt	20280
gtcagaagta	gagggacagg	gagtgtgaat	tggaaactggc	cattttgttg	ccgggctggg	20340
gatcttgaat	tcattggcca	catctaagat	ggtggacttc	acactcccat	acggattgcc	20400
tgccccactt	gaaaaatggg	gctgaccggg	ctcacgtggg	ctgacctttc	cacgtggcag	20460
ctgtcatgct	cacatcccgc	actcccatgc	ctgcctggcc	tccagaagta	ggtctgttcc	20520
cccagggagc	acatctgagg	gagaaactgc	atgaagttct	gcctctggct	acctaggcc	20580
ggagcatcct	gccctttcca	gaaacaccag	gtctcacctc	aggtcatttg	gccttcagca	20640
ctgtcccgc	ccgctctgca	gtagccactg	agcagggcac	agcactgtgc	aagtgccagg	20700
agagtgttta	cacccaatac	accatcattc	aacaaatatt	tactgccctg	gggttctggg	20760
ctgagcggca	caggccctgt	gccaggtctg	gagtctggcc	tggagcgtca	gggaggctca	20820
aaggcctgag	ggcttatgtc	tcattgggtct	catgggacat	tgatgggggg	tgggctgggg	20880
tgacgcttcc	ctagggagag	gggagtgtgg	gtcaggttac	tttgtggggg	gctggtttgg	20940
ttgtgggaga	agttccattt	agaatgcctc	aggagggaa	atcggggaag	cctcgaatgc	21000
ccgagtgagg	ggctgaatgc	tgagtccata	aggtggtgat	gggactgggg	tctgtggccc	21060
aggtagtgtg	gttctgagca	gctcctccct	gagttcaggc	gttcatttcag	cgctgcata	21120
ctacgaccag	cccccttttt	gcgtcctcag	atatggcaat	gcagcagatg	ataggacaga	21180
caaggtctca	cctctctgtg	cgcgtctatg	tgggagagat	gggagtcaca	cagccgcac	21240
aggcagtgc	ggcagtcaca	ggcaggagag	gaaagctggg	gaagaaggtg	gcgggtgatg	21300
gcggcatggt	agtgtgctct	gaagggctct	tcgagaggtg	acattgaagc	agatccctga	21360
agcgacctga	gggaaggggc	ctggtgagaa	cctcaggaga	gtcccgggca	gagggaaagag	21420
ctagaacaca	ggccaggccc	tgagccaggg	ccgccatggt	gtgtctgcag	aagagcagaa	21480
ttcaggaaaag	gaaagaggaa	gttggcgag	tggagggggc	tgcccaggcc	agatggtgga	21540
ggaccttgga	agaagtcccc	agtgtggctg	tctgggctcc	tgtggtttta	ttccagggtg	21600
atgagaagcc	agcagagggg	tttgggttgt	ggaggctgtt	ggcaagagtg	gtgggaaggg	21660
gctgggaggt	aggagaccat	acgactgtca	ggcctgagac	agggcagggg	ttgggggaaa	21720
tgtggggagg	actccaaggc	tggagaataa	gggtttcgtg	ctgaactccc	ctccatgctt	21780
ggaaggggaag	gggtgcatct	gagcttggtt	ttgagatgca	gtgagtttga	ggggccccc	21840
gagcagcccc	agccccacga	cttaactgtg	gtggggcgtc	agggtggttc	ttaatctccg	21900
tacctgtctt	ccctctgtga	aatgggtggaa	gcacagccgc	cccgggcacc	tgggtggggat	21960
gcagtgagtc	ttgggtggcca	cacagtaagg	cgaagagagg	actcagaacc	ctcccacccc	22020
actctcacc	ccgcctctcc	cttagttaat	ctgactccag	gcagccttga	aactttctca	22080
ccctgtgaag	cagtcttcat	cacctgcccc	cttctccagc	tccgtcctgt	ctccgctttc	22140
ctgacttgca	gagcatctgc	cccaatctgc	tcatcctccc	agtaccctca	gccatctggc	22200
tcattggctct	acaaaaacag	ctccacttcc	ggtcaccctg	ggtgacccca	ttgccacatc	22260
cactggcctc	ctttgctgtc	tgggctccaa	gcactctgat	ctgcctgttt	ccctctgttc	22320
ctttctggaa	tcttcttttc	tcctccatcc	tctctgattc	tcctgtgac	tttgcccttc	22380
ctacccccact	gttaacagtg	aaatttccag	ggctgtccca	gttccaagtg	agtagatggg	22440

ggtgcccggg	aatctgtgtt	ttccatcage	tcttcagggtg	atttgtcata	gtggacaagc	22500
ttgagaaact	gcttttggtg	cgagtgtttc	tttttttttg	agaagggggt	ctcactctgt	22560
caccacaggct	ggagtacagt	ggcacaatca	cagctcactg	cagccttgac	ctcccagggt	22620
caagcgatcc	tcacacctca	ggcttctgag	tggctgggac	cacaggcagg	cgtcatacaca	22680
tggggtaatt	tttttttatc	tgtagagtgg	aggctctgtc	atgctgcca	ggctcgtctt	22740
gaacttctgg	cctcaggcag	tcctccggcc	tcggctacag	gcctgagctg	ccacaccag	22800
tcttgctggt	gtttcataag	gtccggcccc	tcccgtcggc	ctcagggtga	tgacttgtga	22860
ggcccagcga	tgggctcgga	agctcttggg	cagtatcccc	caaactctgt	tcccccttgt	22920
aggtgttcc	cttttttctt	tgtcgcagaa	gagtgtgtga	ctcacaaaaa	gttgaggact	22980
gttccttgat	gtcctcccag	gcttcgcccc	ccacctggct	cctggtaatg	caaggaactg	23040
tgtttccatc	cattcccttc	ctttcactgc	aactccagcc	ccacgttttg	aactacctat	23100
tcgagatttc	tgtctctgga	catccctgta	atgcctcaaa	ctcaactcgc	ccaaaagaga	23160
atgtgccatc	tcccgctctc	aaaggctttc	atgcaacctt	cttctttgca	gagcagcaaa	23220
agctacccct	gtcacagctg	ccaagccag	aaactaagac	cagagccgct	ttcaactctg	23280
ccctcttctt	cccttatggc	cacaaacccc	aagtttctct	tctgtggtga	tttcagatcc	23340
gcttctctca	cttctttttc	cctccttccc	accacttctt	ggtactgcag	gagcttatcc	23400
cagagtcaca	gactcaaatg	cctgcagggg	cctgagggag	ggagggtgcac	ttggcatctc	23460
aggaaggggt	gtgtggctgg	gtgtgggtgg	tcccgcggcg	aatcccagca	cttttgggat	23520
tacatttttg	ccaagacgga	cggatcactt	gagcccagga	gtttgagacc	atcctaggca	23580
atgtgacaaa	accctgtctc	tacaaaaaaa	attaaaaatt	agccaggcct	ggtggtacat	23640
gctgttaaca	gtcccagcta	cttggaacc	tgtggtggga	agatggcttg	agtcggggag	23700
acagaggttg	cagtgaagctg	agattaccct	ccagcctgag	caacagaccc	agaccttgtg	23760
tcagaaaaag	ataggaaaag	ttgtgggggg	ccccagtgga	tctggggcat	gtgtgcgctg	23820
cctgaagggt	ggcccttgcc	cagtgcttcc	ccctgtctgc	cctgtcagaa	tctagggcca	23880
ctgttgccag	aaactctgag	aagctagaaa	tcgagactta	tgtgaaatct	gatttttagg	23940
tgccagatta	gattgctttt	tccgtttcat	tgatttctac	tcttaatgtt	actaatctat	24000
gcttctactc	acttggtttt	ttgtttgttt	gttgttttgt	tttgagatgg	aatctcgcctc	24060
tgtcacagtg	gcgcaatctc	agcttactac	aacctctgcc	tccccgggtc	aagtgattct	24120
cctgcctcag	tctcccaagt	agctgggact	acagggtgcc	gctgccacac	ctagctagtt	24180
tttgtatttt	tggtagagac	ggggtttcac	catgttgccc	aggctggtct	cgaactcctg	24240
gcctcaggtt	atccacctgc	ctcagcctcc	caaagtgtctg	ggattacagg	agtgagccac	24300
tgaccccggc	cccttctact	cacttttgat	tcaatttgct	aggtttcatg	ctttagcttc	24360
cctggcacac	cccaacccca	gctttttaag	gtaattcttt	tttttttttt	ttttccaatt	24420
ttctactaaa	atctttatatt	tacaggatta	atgtttcaca	gcagggtattg	agatgattct	24480
taacctttct	ctttgcttaa	caacatttag	agttgccagt	tcaactccagc	atcacttttag	24540
ctacatccca	ctgggatattg	ttgtttttgt	tatcattcag	tttaaagtgt	tttccaattt	24600
tccctgtgat	ttcttctttg	acctttctgt	tatttgagg	caggttgctt	aatttccaaa	24660
tatttgtggg	tttttcagat	atctttttgt	tattgatttt	taatttagtt	ctgttatggt	24720
cagagaacat	actctgtatg	atttcagttc	cttgaaattc	gatgagactt	acccgacggg	24780
ccgaatgtg	tccatagctt	gcggaagctt	ctggggcatt	gacgaggaca	ggtgtctgct	24840
gctgtcaggc	agaatgtccc	cccaggctcag	tgaggctcag	ctggttgagt	gttcaggctt	24900
tctattctga	tttttggtgt	tgttgtttac	ttgttcacc	aatcaatgag	aaagatgtcc	24960
atgtctctca	ctatatattgt	ggatttgtcc	atttcttcc	tcagtcctgg	caggtttctg	25020
ttctgaattt	tctctttttt	tttttttttt	ttttgagaca	gagtctcgt	ctgtcaccca	25080
agctgggtgtg	caatgatgtg	gtctcggtc	actacaacct	ccacctcttg	ggttcaagca	25140
attctcgtgc	ttcagcctcc	caagtcgtg	ggattatagg	catgcactgc	tatgcctggc	25200
taatttttgc	atttttagta	gagccgggg	ttcgccatgt	tggccaggct	ggtctcaaac	25260
tccctggcctc	atgtgatcca	ccctcccaaa	gtgctgggat	tacaggcgtg	agccacccca	25320
cccagcttct	gaattttaag	tttcctatgg	agtaactgaa	gtgcttctgt	ggaatgaacg	25380
tggccttggg	cctaattggg	cttcctgtat	ttcaaattgt	ccatgatggt	cttccgaagc	25440
cacaggctgg	acagcattac	cgcctgctaa	tgtcagggcc	tggattcaag	ggcctgggag	25500
tctggaggag	gaggagatgc	ggcctgacc	tgcagacaga	gcacacaagg	ccttgacaac	25560
cgatctttac	aaccttttcc	cacccctgca	tacctgaaa	tggttttcag	gccaccattt	25620
ctgggatctt	cccagctgcc	tgccttagag	tctttctctc	agaaaccagc	ccgaatgttt	25680
cctggatctc	tgaggattca	tcccaccccc	attcccatgc	agaggccatg	gctcggcgcc	25740
tggcgttccc	gaggcacttt	gtaccatctt	cagtgatgac	acgaatgcaa	tggggttagt	25800
gccacttgcc	cacagtgggt	ctgcgagtgc	ccatggggcg	caccggggct	gcttccaccc	25860
tggacccccag	cctggcgagg	ggcctggcac	atagtagggc	ggggagtagg	tgtgtaagaa	25920
gtaagcttgc	tctggagagg	atgtacctgc	agccggcgcc	cagctctcga	gaggactgtg	25980
ggagggcaga	ggctgaaacg	aggccgctg	ccgagttcct	ccacagaccc	ctgggcgagg	26040
agcgctctgc	tggggactgc	gccagcggtg	cctccaggcc	tggactctca	gctccgctgc	26100

tgccttttggc	cagagttccc	aaaggcgggt	gtgggtgtct	ttggtgggaa	ggttcagcgc	26160
accgcgatag	taatagggga	gcaagcactc	gctgagccca	gtgcagggcc	tggaccgtgc	26220
tccatagcaa	gcaactgatct	tgggctattg	gttttggagg	aaagagggag	cacaaggatg	26280
gaaggggcca	gggaagagag	gtcacgggtg	gagaaggaga	gtccgcatcc	atcggagggt	26340
ttgtcactca	ggcctgagtg	ggaggcactg	gaggcaggga	gaggccagtc	agcagcatgc	26400
ggccacagcc	cagagaagcc	agaggggttt	gctgggtggg	gggccccagc	cttttcaagg	26460
gaacggcagg	tctggggagc	tgccgatctc	gggggtgtgag	ggtaacgggc	aggctgtggc	26520
ccacccctcc	ttctcaggct	cactggaccc	ctgaccggtt	tcatcaccat	tatccaaggc	26580
tttgaanaa	ccccctggcc	ttcctgccac	atgtgcccta	gctatagggc	ttcgttcccc	26640
tccacaaatg	gtgcagacag	catgagccac	cctggcaggg	ggctgggggt	ccgtggggta	26700
ggagttgggg	gtagctgagc	gttcttttct	gtccccacgg	tgcctggtgc	tggggcttgg	26760
cagccagggt	tgggacagcc	tggcttttagc	aggctcctgag	tcaagggtct	caggctccgc	26820
agcacacagt	ccccaggcag	gtgtcaggat	gggatgtggc	cagagaaagg	catgtgctct	26880
gtctggggat	agctgccacc	cactgacac	agtgtggcatg	agattgtgga	gttttatgga	26940
gtaaaatcac	aaatctgggt	tttttaagta	aaaccttcta	tgagttgccca	tctctggcct	27000
tcaacatagg	atttggtctt	ttcctgggtg	agctggtgct	ttgtggggcca	ggccctggga	27060
gctgcaagta	ccagttggga	tctgccattg	ccctgtggaa	ggatttttaag	caggggtgaa	27120
acatggtcag	acttggaatt	agagatgagg	aaaaaaaaa	aatcacggt	gccagagtct	27180
ctggggagac	tggagaatgc	agtgcagggg	ccgcaggagc	caaaaagggg	cactggctct	27240
gcgaagagtg	gctctgtcca	tccctgcctt	ccagtatgtg	cccactgtga	ccagagctcc	27300
atttctcaaa	agaagccagt	gatgccaatt	accatgagaa	atttccttat	ttttaactgt	27360
cgattaaaa	ttgtacaagt	atggtggggc	aggcctgcaa	aatgatctcc	aagtgcctgg	27420
cttttgatgc	ccgtcttaaa	agcatgtgtg	gcactggagg	gcccacgttt	ctttgttctt	27480
cttgagaagc	tggggtgggg	gccggctggg	ctcagggtgc	ggccccctac	ttccccaggc	27540
tgtggtctcg	gtggggcctg	cactgttctt	gggtgtcctt	gggctgagcc	tctgcctgtg	27600
gaggacggcc	gctcaggcat	gatccgtcag	cgaagccgtg	gctgtgactc	tgttttccgc	27660
agtggagcgg	aggcggaggg	acaagatcaa	caactggatc	gtccagcttt	cgaaaatcat	27720
tccagactgt	aacgcagaca	acagcaagac	gggagcggtg	agcaccctcg	accctcagtg	27780
tctgcgggtg	tcccggcccc	cgacccttgc	atgcagaaag	tccaacagcc	atggggctcg	27840
ggagtcatcc	ctgggggtgga	ggccggtggg	cggtgcctgc	cctaaggctc	ctggtccccct	27900
cgccccccag	agtaaaggag	ggatcctgtc	caaggcctgc	gattacatcc	gggagttgcg	27960
ccagaccaac	cagcgcattg	aggagacctt	caaagaggcc	gagcggctgc	agatggacaa	28020
cgagctcctg	aggcagcagg	tgggtgcggg	gcctggagcg	ggtcaggggc	caggagcccc	28080
agatgcaagg	cgctggccct	cagctccctt	gacctccgtc	gtgtccgccca	gatcgaggag	28140
ctgaagaatg	agaacgccct	gcttcgagcc	cagctgcagc	agcacaaact	ggagatgggtg	28200
ggcgagggca	cccggcagtg	acgcccgcga	ccaccacgca	gccgcgcgcg	cccacgccgg	28260
cctctgctgc	ccccctcccc	agcccttagc	acagagaggg	acacatgccc	ctcccccagc	28320
tgcgtttttt	tatagtagat	ttttaacaaa	aaacggggag	aaataatgca	tttctgtgga	28380
tacagtgcct	accgccctcc	tccacttgga	aacggtatcc	tccctgccca	tccgtctgtc	28440
tgtcgccctt	ctcccggccc	tactaagcc	ccggcacttc	tagtggtctc	acctggaggc	28500
aagagggagg	ggacagaggc	cctgccacgt	cccgtgctct	cctgctctct	ggaggtactg	28560
agacaggggtg	ctgatgggaa	ggaggggagc	ctttgggggg	ccaccggggg	cctggacctta	28620
tgcagggagg	ccacgtccca	ccccacctct	tgtttctggg	tccctgctcc	cctttggggg	28680
tgtgtgtgtg	tgttttaatt	ttctttatgg	aaaaattgac	aaaaaaaaaa	tagagagaga	28740
ggtatttaac	tgcaataaac	tggccccatg	tggccccgcg	cttgtctgct	tgtgtgtttg	28800
tccatctcag	gagtggggag	ggggcctggg	gtctgcagag	ctccacgagg	catggttctg	28860
ctgttggtgca	catggctgtg	catggctcct	gccagctgca	ccaccatta	cccagtgggt	28920
ggttggtatg	atggaggaat	taagggaatga	atgtcccctt	tgaggcccta	gacgtgcatg	28980
aggggtgtgg	gagctggggg	caaggacatg	tcccatgttg	gaggagaggc	aggggtctcc	29040
gtgtcaacag	ttcctgaaaa	cacaaccagc	ccctggccct	gcctgctggg	gccaaagccc	29100
tcccctctgc	accagccaat	agtggggcct	ggccttgagc	ccctcaccct	cagggagggc	29160
agatggccag	ggcgccaagc	ttggcccgtc	agcctgtcgc	cttgacacaa	ggctctggcg	29220
cctgtgctgt	gacccctgcc	cctgctgatg	atgaaacctg	tcctcagctg	agatgcagcg	29280
atgcctggta	gggctggggg	ctgctcctgt	gtctccccag	gtgagcacac	ccctattcac	29340
tgggcccctgc	ttcagcctgc	agcacccttc	aactcccagg	agctgggctt	gccactctgc	29400
tcaccttggtg	gagctccatc	tgccttttct	ccccaattec	cccactccct	gcactcgtct	29460
cttcccacaa	gagccctgtc	tccttttctt	agctattccc	atctgaggcc	atctttattc	29520
atttagtttt	tagagacagg	gttttactct	caccagggct	ggggtgcagt	ggcacacaa	29580
caaggctcac	tgcagccttg	accaactaca	ggtgcgtagc	accacagcca	agttttttgta	29640
tagatggggg	ctcgctttgt	taccaggct	gtgacaagag	gagcctccca	cgtgggtgtg	29700
atgaggaggc	agatggcagg	gcctgtgcat	ttctgtgctt	gagtgggcct	tgaagtggt	29760

tcagcaacca	ggaagaagtg	ttcatcctc	gacaacaaca	tccccgggct	ctggtgactt	29820
ggctgacact	ggatggccct	ggaatgaaaa	aggcaaagag	gcaaaatgtg	caagggccca	29880
tctggaacca	aggtttgttg	atccccctggg	cogtgtgcac	cctgagctgg	gcctggtagt	29940
ggaaaggaat	gaaggcactg	cagtcaggca	gcctgggttc	atcccccagc	tagtgggtgc	30000
ctaaggaacc	ggctccccaa	aaacatccct	ggcttgtagt	gcttgccaat	ttctgggtgt	30060
caagactccc	actgctgctg	atttcaggat	accagcatga	tgccactgaa	tcagagttt	30120
cgagatgtgc	atggtctgct	atgttgagcc	aggtctagca	taccgctgtg	ccctgctgtg	30180
ttttagggga	gatggggaaa	cctggtgggt	aagagcaaaa	gccctggagt	caggctgtcc	30240
aggctagaat	ctcagctctg	cctctggctg	agcaagcttg	ggccatgccc	tgatctctgc	30300
cttcagtgcc	ttttctgtaa	agtgaaggaa	atgagtgtcc	gacggggagg	aggttcctaa	30360
aaggggagcag	ggtctgggga	gcccaggcct	ctgggggttg	gtgactgaga	aggcagcccc	30420
tgaatacaga	gcagagctga	aggtggggca	gtaagtgtg	ctgggagaac	aggcagcaca	30480
ggctgagttg	gtgcagaagt	gagtcaacat	atgtgccatc	gtataaaatg	tactcatcgg	30540
actgtagatg	ttagctatta	ctattactgc	tattttatgt	tttatagaca	gggtctcact	30600
ctgtcaccca	ggctggagtg	cagtcacaca	atcatagctc	actgcaacct	cagcctcctg	30660
ggcttaagcg	atctgcctca	gcctcccaag	tagctgggac	tacagatgtg	tgccaccacg	30720
cctggctaaa	tttgtttaaa	attttttttg	tagagatggg	gtctccctat	gttgcccagg	30780
ctagtcttga	acttctgggc	tcaagcgacc	ctcctgcctt	ggcctcccaa	attgctggga	30840
ttacaggcat	aagccactgt	gctggggccat	attactgctg	tcattttatg	ccaaaagttt	30900
gctcaaacat	tttccagtta	ccagagccac	atctcaaggg	tctgacactg	ggaaaacacc	30960
acgtgcggtg	cgggcacacg	ctgatgcttg	ccctgctcag	ggctatctag	tgttccctgc	31020
cagaacctat	gcacgtgtgg	tgagagctta	aagcaattga	tgcttcccc	aacatgccag	31080
acactcctga	ggctgctggc	ggctgctggc	ctgccccgt	gtgcatgtag	gcgatgggga	31140
agtgaagtga	ggagagcgga	accttgattc	tgctcatcaa	actgcttaac	cgctgaagca	31200
aaagggggaa	cttttttccc	gatcagcaga	atgacatcgt	gatggggaaa	gggctcccca	31260
gatggctggg	gagcagtgtg	tgtctgtgac	cccgctctgc	ccacccccctg	aacacacctc	31320
tgccggctga	gggtgacaca	accctgttcc	ctgtogctct	gttcccgtt	atctctcccg	31380
ccttttcggc	gccaccacct	tcttggaat	gagacagagc	aaaggggagg	gggctcagac	31440
caccgcctcc	cctggcaggc	cccataaaag	cgactgtcac	tcggtcccag	acaccagagc	31500
aagctcaaga	cccagcagtg	ggacagccag	acagacggca	cgatggcact	gagctcccag	31560
atctgggccc	cttgccctct	gctcctctc	ctcctcgcca	gcctgaccag	tggtctgttt	31620
ttcccacaac	aggtgagagc	ccagtggcct	gggtccttag	cagggcagca	gggatgggag	31680
agccaggcct	cagcctaggg	cactggagac	acccgagcac	tgagcagagc	tcaggacgtc	31740
tcaggagtac	tggcagctga	acaggaacca	ggacaggcac	ggtggctcat	gcctgtaatc	31800
ccagcacttt	gggaggttga	ggcaggcagc	ccacttgagg	tcagtttgag	accagcctgg	31860
ccaacatggt	aaaaccccgt	ctctactaaa	aatacaaaag	ttagccaggc	ttggtggcag	31920
gtgcctgtaa	tcccagctac	tcgggagact	gaggcaggag	aattgcttga	acccgcaagg	31980
tggaggttgc	acagtgaagt	gagattgcac	cactgcactc	cagcctggca	acagagcaag	32040
actccatctc	caaaaaagaa	cagaaatcaa	tgaagcaccg	agtgcaggg	actggaaggt	32100
cctaattcca	tgggtattta	cggaacccct	acgcctgtgt	gagtcttatt	ctagacagtg	32160
gggacgaggc	catgaacaag	gtagatgaga	gaggagattt	ctccatcctg	gtcagggagt	32220
ttgttaaaga	ctgatgaaaa	catgaataaa	taattgtgtc	tagtacattc	tattcgtgaa	32280
tctcataaca	gacagtggta	gagtgaccgt	gacccattcg	ccacacagta	gagtcacttt	32340
tttggtttgt	tttttagaga	cagggtcttc	ctctgttgct	gaggctggag	tgcaagtgtg	32400
cagtcatagt	tactgcagc	ctcaacctcc	tgtgctcaag	caatcctccc	acctcagcgt	32460
cccaagtagc	tgggacagca	ggcacatgcc	acgggttggg	ggaccacagg	catggtcaag	32520
gggctggcag	tcaagcaagt	gtttcatgag	aaagtgcag	ttgaccttcg	tcttgagggg	32580
tgagagatgg	aggcagcaaa	gacctaaagga	gaggacaagc	cagcatagcc	cagggtcagg	32640
ctgaacaaga	ggagatgggt	ggacttgggg	ataaggctga	ggggtgggca	gtcccctaagt	32700
cttgtgggca	accatgcaga	cactgatttt	tccttggaat	aaagaggaag	cccccataag	32760
cttttttttt	tttttctgag	atagggtctc	gctctgtcgt	tcaggctggg	gtgcagtggc	32820
atcatctggg	ctcactgcaa	cctccgcctc	ccgggttcaa	gcaattctcc	tgctcagct	32880
tcccagcag	ctgggattac	aggcggctgc	caccacgccc	ggctaatttt	tgttttttta	32940
gtagagacag	ggtttcacca	tgttggccag	actggtcttg	aactcctgac	ctcaggtgat	33000
tctcccacct	cggttcccca	aagtgtctgg	attacaggcg	tgagccactg	cgcccagcct	33060
cctgtaggtt	tttaaaatgg	agaaaaccac	aatctcactg	gccatgtttt	aaaaaactta	33120
atctgccagt	caggcaccat	ggctcacacc	tgtaattccca	gagttttggg	aggccaaggt	33180
aggaagatca	gttgagccca	ggagttcaag	accagcttgg	gcaacacaac	cagacccac	33240
ctctacaaaa	aattaaaaaa	ttagccgggt	gtggtggcgt	gcacctgctg	tcccagctac	33300
tcgggaagct	gaggcgggag	catcgcttga	gcacaggagg	tcaaggctgc	agggagctat	33360
gactgtgcca	ctgcactctg	gcctgggcaa	cagaggaaga	ctctgtctaa	aaaacaaaca	33420

aaaaaagtga	ctctgctgtg	tggcaaatgg	attgaggggc	aagaatgcag	ggaggtgtgt	33480
taggaggctg	gcactggcat	ccaggcaggg	gaaggtgata	tcccaaagaa	gagtagcagc	33540
tgtggaaaga	ggaggaggcg	gatctgggag	gttttttttt	ttaggaaaag	ccgcccattg	33600
gaaggtgagc	agaagcaaga	aagcaaggcc	cctcctaaga	gtccatttga	gctctggggt	33660
taaaccactt	ggagaggagc	aggttgccgg	gagccagtct	cagaggtcca	ctgggcccc	33720
tgccatcctc	tgcaccccc	tctgctttca	cagacgggac	aacttgcaga	gctgcaaccc	33780
caggacagag	ctggagccag	ggccagctgg	atggtgagcg	caacagtgat	gcctttccta	33840
gccccctgct	ccctcccat	gctaaggccg	gttccctgct	cacattccct	tccttccac	33900
agcccatgtt	ccagaggcga	aggaggcgag	acaccactt	cccatctgc	atcttctgct	33960
gcggtgctg	tcatcgatca	aagtgtggga	tgtgctgcaa	gacgtagaac	ctacctgcc	34020
tgcccccgtc	ccctcccttc	cttattttat	cctgctgccc	cagaacatag	gtcttggaat	34080
aaaatggctg	gttcttttgt	tttccaaacc	agagtgtctg	ttgtcctttc	tctctgccga	34140
gtgtctgtgc	taagagcttg	tcctgacctt	gccttgcaag	caccagtgt	tgggtgggtca	34200
tgtggggctg	gtgtgtcctg	gaggttgcc	ggaaagttgg	tgaagaaaat	ttgtttctgt	34260
tctccccctt	catgttgcaa	taatagggga	tgaagtttaa	tgtttctct	ccttgagatc	34320
ttcctaaaac	agctgtagaa	atcagtgcct	gtaaggcaag	cttgtccaac	ctggaggcca	34380
catgcagccc	tggatggctt	tgaatgcacc	caacacaaat	ttgtagtttc	ttaaggcatt	34440
atgagatttt	tccgcaat	ttttttttct	catcagctgt	cattagtgtt	agtgtgtttt	34500
atgtgtggcc	caagacaatt	cttccagtgt	ggcccaggga	agccaaaaca	ttggacactg	34560
ctataaaggt	tctcaaagta	agatccaggg	actccttttg	tagggctcct	gaaggtggaa	34620
actactaaga	cttttttttt	cctttttttt	tccttttttt	tcctttcttt	tttttttttt	34680
ttgaggcaga	gtctctctgt	gtcaccagg	ctggaggcca	gtggcatgat	cttggtcac	34740
tgcaacctcc	acctcccagg	ttcaagcgat	tcctctgcct	cagcctcctg	aatagctggg	34800
actacaggca	cgtgccacca	cacctggcta	atctttgtat	tttttagtaga	ggtgggtttt	34860
tgccatgttg	tccaggctgg	tctcgaactc	ctgacctcaa	gtgatccacc	cgtctcagtc	34920
tcccaaagt	ctgagattac	aggtgtgagc	caccacgccc	ggcctacaaa	gatgtttatt	34980
tgcttttttc	accctgggtc	tctcatgagt	atacaatgga	gtttccagga	ggctctgcga	35040
cacctgttgg	catcatcacc	agatggctaa	tggattgtgt	gctggtgtat	ctcacgcttt	35100
taaagtgtccc	agtttctagc	ccggtgcagt	tgcaccagcc	ctgctactcg	ggaggtctgag	35160
gcaggaggat	aatttaagac	tgggagttcc	agaagaagac	ctggtgtcaa	aaaaaaaaaa	35220
aatggggcaa	cgaaaatgag	agcaatacag	ctttcaagaa	tgggaggggc	caggggtggt	35280
gattcatgcc	tacagcactt	tgggtggctg	aggcaggcag	atcacttgag	gtcaggagtt	35340
caagaccagc	ctggccaaca	tgggtgaaaca	ccgtctctac	aaaaattagc	caggcatggt	35400
ggcatgtgcc	tgtaatccca	gctagtccag	aggctgagtc	aggagaatca	cttgaacctt	35460
ggaggtggag	gttacagtga	gccaagacaa	cactgctgca	ctccagcctg	ggcgacggag	35520
tgagaccctg	tctccagaaa	aaaaaaaaaa	gaagaatggg	caggaaactca	gttccttgtg	35580
gaggtgaact	atattcctat	atgtttcacc	tgcaaagtgt	gtccttctct	agagaataca	35640
acttaagatg	ctcctgtgta	acaatcccc	atacctcgct	catctgctat	acctggatgg	35700
cctctgaagg	ccatgggctt	cacacctttt	ggtcttagga	cccctttaca	ttctgagaaa	35760
ttattgagga	ctccaaaag	ctcttgataa	agtgggtat	atctctagtt	gcctgatgta	35820
ttagaaactg	aaactgggaa	aatattttta	ctgtttattt	atttattttt	gagacagggt	35880
ctcactctgt	cgcccaggct	ggagtgcagt	ggcgcatct	cagctcactg	caaactccac	35940
ctcccagttt	caagcggttc	tcctgccttg	gcctcctgag	tagctggaac	tacaggcgcc	36000
cgccaccatg	cctggcta	tttcatattt	ttagtagaga	cagggtttca	ccgtgttggc	36060
caagctgggtc	ttaaagcctt	aacctcaagt	gatccacccg	cctcagccac	tcaaaatgct	36120
gtgattacag	gtgggcctgg	cctgcccaca	tttgatagaa	acagacatag	gggctgttat	36180
ttcactgtct	tcttagctcc	caggaagcaa	cagctctcac	ttgatggtaa	agggcattgg	36240
tcattcggcc	tcaatgttgg	gtgtgggcag	ggagtgggaa	ggcccaggct	gggcgggaga	36300
gggtcccaag	acacggctgc	cacacccaag	gcaggtaaac	ctgactagaa	cttctgattt	36360
tgtcaagaga	aggtgggaat	tcctattttt	attagagatt	tcttgctttg	acagtattgg	36420
caactgagca	aagcaatttg	tcttttaaca	tcaacattct	gtgagccaaa	cgaagcccag	36480
ctgggcgcca	gatcagctct	gggcaccatc	aatgtctgcc	ttcgcttttg	aatccacaga	36540
ggcttgtcct	ctgggagggg	aggtttctct	aatgaaaact	gaagggatag	ggagagggga	36600
gttgtgtgga	gcttggcctc	ttattagctg	taacatcttg	catgcatctt	cttcatatcc	36660
ggagctccac	ctcctcatct	gtatttttta	ttttattttt	ttagtctggg	tcttgctcca	36720
tagcccaggc	tgaagtgcag	tgggtgtgatc	atggctcact	gcagtcttga	tctcccgggc	36780
tcaagcgatc	ctcccacctc	tgcctcctga	gtagctggga	ccgcagggtg	ctatcaccac	36840
gccccgataa	agttttgtat	tttgtgtaga	gacgtggatc	tggctgtgtt	gcccaggcgg	36900
gtctcaaaact	catggcttca	aatgatcctc	ccacttcagc	ctcccaaaat	gctgggacta	36960
cagttgtgag	ccaccatgcc	tggcctctcc	ttacctttaa	aagaacagag	gcactgggag	37020
tgggtggctca	cgctgtaatc	ccagcacttt	gggaggccaa	ggcgggtgga	tcacctgagg	37080

tcaggagttt	gagaccagcc	tgaccaacat	ggtgaaaccc	cgtctctact	gaaaatacaa	37140
aaattagcca	ggcgtgttgg	cgcacaccta	taatctcagc	tactctggag	gctgaggcag	37200
gagaatcgct	tgaacccagg	aagcagaggt	tgcagtgaac	caagatcatg	ccactgcact	37260
ccagcctggg	tgacagaaca	agactccatc	tcaaaaaaaa	aaaaaaaaaa	caaaaaagga	37320
acagaagcta	agtccataca	ggacttagct	taactggctc	tagagctgct	caaccaaggg	37380
aatgagtgtg	aaattgcttt	ggaaactgtc	caatgcttcc	tcaatgtaaa	ggattcatat	37440
tgacaggaga	gggtagaggc	ctccctcctg	gcagggtgga	aacctgaaat	caggaattac	37500
acttaatgac	acggggtgct	cttctctcct	gagcaagcag	ttctctgggg	tggtcctaga	37560
gagatgggag	aacatgtaaa	gcagagatac	tcaaatttca	gcgtgctcaa	aatctcctgg	37620
agggcctgca	aaaatgcaga	tgggtccagg	ctcagtggct	caagcctgta	atcccagcac	37680
tttaggaagc	tgaggctgga	ggatcacttg	aagccaggag	ttcgagacca	gcctggccaa	37740
catggtgaaa	gcccgtctct	actaaaaata	caaaaattag	ctgggtgtgg	tggtgcacac	37800
gtgtagtccc	agctactcgg	gaggttgagg	cacgagaatt	gcttgaacct	gggaggcaga	37860
agctgagggtg	agctgagacc	ttgccactgc	actctagcct	gggtgacaga	atgagactct	37920
gtctcaaaaa	aaattaaata	aataaaaaata	aaatgcagat	gaggctgggc	gtggtggagc	37980
atgcctataa	tcccagtggt	ttacgaggct	gagacgggag	gattacttga	ggccaggaat	38040
tcaaggctgc	agtgaacctat	gatggcacca	ctgcactgca	gcctgggtga	cacagtgaga	38100
cgatgtctgt	aaaacaaata	aacaaataaa	ctgcagatag	ctgggcctcc	agaatttctg	38160
attccacagg	tgcaaggcgg	ggcccttgac	cttgcattht	gagcaagctg	cagtcctgtg	38220
gaggactggg	tgtgaagctg	acaccattgt	ctgagggcag	caaaggctct	tggatggatt	38280
gagcctcagc	tcccatctat	gagagcttta	agctttaagt	gagagctccc	catggccgag	38340
agcttcattc	tgaattcctg	ctgctaggaa	ttcaaaactc	acattgaagt	cctaacgcct	38400
agtagctcag	aatgtgacct	tagttggagg	cagggctctc	acagaggtaa	tcaagttaaa	38460
atgagacggg	agaatcctaa	tccaatataa	ctggtttcct	aaatctgaca	gggtacagtg	38520
actcacacct	gtaatccag	cagtttgagg	ggccaacaca	ggaggactgc	ttgagatcag	38580
gaattcaaga	ccagcctggg	caatatagtg	agaccctgtc	tctagcaaaa	aaaaaaaaaa	38640
aaaaaaaaagt	gccagtagtc	ccagttacta	ttgagaggct	gaagcaagag	agtcgcttga	38700
atctggaggg	tggaggtggc	agtaagggtat	gattgcacca	ctgcattcca	gcctaaatga	38760
caaagcaata	ctatgtctca	aacataaata	aataaataaa	taaataaata	aataaataaa	38820
taaacggcaa	atctgggagc	gggtgaatac	agggggaagg	gaatgtgaag	atgaagatgc	38880
catacagaga	aaggcccggg	acagatcctc	acaccctca	gaaggaacca	acactgccag	38940
cacttgatct	tgttgatctt	ggaattcaag	ctcaattctg	gcagggtttt	ttgtttgttt	39000
gtttgtttgt	ttgtttgagt	cggagtcttg	ctctgttgcc	cagcctggag	tgagtgccg	39060
caatctccgc	tactgcccag	ccccgcctcc	cgggttcacg	ccattctcct	gcctcagcct	39120
cctgagtagc	tgggactaca	ggcgccctgc	accatgcccg	gctaattttt	tgtattttta	39180
gtagagacag	ggtttcaccg	tgttagccat	gatggtctcg	atctcctgac	ctcgtgatct	39240
gcccgccttg	gcctcccaaa	gcactgggag	tacaggtgtg	agccaccgtg	catggcctca	39300
attccggttt	ttaagccacc	cagtttgtga	aactttgttg	taacagccct	ggaaaactga	39360
tacacctgct	ctctcgtaaa	agatcagctg	atacggcgag	accggccact	ggatctgcgg	39420
gtcagttgtc	cccttagaca	gggcacctgc	ccgccagttc	caggtcctgt	cacccagccc	39480
cttccctcca	tgggctccag	ccgcctcgct	cccacaggtc	tccctggagac	ccgagttgct	39540
gatgtcagcg	actattgcga	gtgctcctgt	gggacactgt	cctctcccca	gcaacagcct	39600
tcagttcaca	cccaggggag	agatggagcc	ccacactgca	ccagcacacg	actccagctc	39660
caactaggtg	ggtgttgatg	ctgaaggctg	tgacatgcaa	atacccccca	ggatctcctt	39720
gtcaccccga	ccaccaccac	caaagcccag	gcaccaggcc	cctctcttct	ccaggaccca	39780
ggcattcaag	ccccgcccga	ctctcaatgg	tcccttgtcc	cggactggga	aaggcacggg	39840
cagagtctga	catcatgaag	cctgggggtg	gggtgggact	ccccctcccc	ctccaactcc	39900
ccccagcccc	cacaacgctt	ctctccctgg	tctgagggat	ttccccgccc	ctcacccccct	39960
gggttctccc	ttgagagcga	ggaccccccc	tccccactgc	tctggcctga	aggaggacag	40020
gagatgtccc	agtgaagctg	aacagctcat	ggtgaaatca	ctgctgcact	ttgtcacgcc	40080
acctccagct	gccccgagcc	cccacccacc	ttgcaaaaagt	catgaccaag	gggtggaatc	40140
tgcactcaga	gggtcccttg	ccaacttggt	cagcacagtc	ctatgtgcac	caagcactgc	40200
ccgggggaca	gaagggtgca	catgacagac	agagaggcag	ataggtttct	ggtgagcccc	40260
tgccctctgag	agctcctggg	ttagtgggag	gcagaggcgg	gcagacctag	ggtgcacacg	40320
ggccagcctg	ccaaggctac	agaaggaaaag	gacagcattg	caatggaggg	gcctggctga	40380
tggggaagga	tgggaaagct	tcccagggaa	gcggcaccca	ggctgctgag	cctacaggat	40440
gggtgaacgg	cagccagtgc	cagagtgggg	agtgttatgg	ggtggggact	gctttccagg	40500
aagaatgagc	agcaggtgca	caggccttga	gtctgaagggt	gccctggggc	tctgggggaa	40560
acattcaacc	acccacactg	tttattaagc	tcaactgcct	gccaggagct	tgtctacgag	40620
caaggatgga	ttgagaatat	ccaagacgaa	gcttctggcc	tggtggaggt	cacgttctca	40680
tgaaaggagt	tggtgaacac	ggaagggtcat	ttcagatggc	aaggaggagt	gacactgacg	40740

ttgaggggtgg	aaaggacctg	tctcctcctg	ctgccccacct	aatgttgcca	ccaagattcc	40800
ctgaggacaa	tgcctctgtc	cctcagcctg	ggacttccaa	agagattaga	ctgccccccc	40860
acccccggga	cccagaatca	gggtgtacag	ggatggaaga	tggggagaga	gcaaggcagc	40920
cactcccgac	ccctccagga	aagagctagg	agaacccagg	cgtcaggctg	cccagtccga	40980
gccccgtggt	gacaagggcc	cctttgtgcc	cccccccccc	gggggtaggg	aggagctggg	41040
ccctggaggc	aggcggcccc	tggcaccag	ggggagggga	ggggctggca	agtgggggcc	41100
tagaccctgg	aaggcagggg	actgcgagct	gggctggcgg	agcagaggtg	cagaagcaac	41160
tgagtccaag	tgagtatggt	ggcagggagg	ccagggcaag	gggagcaggg	caccggggca	41220
gtggcaccca	gacgtgagca	gggtcaggtg	ctctgggtga	gggagcatcg	ctgtgcaccg	41280
ctactgattt	aggatgcagg	agtgtgtggc	ttggggctgc	tttggggatg	ggctcggacc	41340
atcgctgggg	cagcgatggg	gctctgggaa	gaaaccacag	agagaaaaaa	caaagggccc	41400
cccctcagca	ccccttgtgg	gtgaagattt	tgcaggagag	gtttccttgg	ggttcccag	41460
tgcggggcag	atgggggtga	ggaggtctgc	atctggccga	agaatggaag	gatgtccagg	41520
tgatcagaca	cctgcaggct	gcaatctggg	agggtgatgg	gggcagtggg	ctgttagtga	41580
ctgcattcta	gcacctgggc	acatagcagg	tgtgtgtgtg	tgtgtgtgtg	cgtgtgcgtg	41640
cacacacatg	gctgccccatg	caccttcctc	tgtaagcctc	agtcgacttt	tcttcattaa	41700
tccccactaa	ggacactttt	tatttttctg	tacttttttt	tttttaagag	acgggactct	41760
cactatattg	cccaggctgg	tctcaaactt	ctgggcacaa	gagattctcc	caacttggcc	41820
ttccaaagtg	ctgggtttac	aggcgtgagc	cactgcgccc	ggccccaaact	acagaaactt	41880
tttagatgca	tttgtcctca	tcccatcctt	cccttggcat	tttaatccaa	cagatc	41936

<210> 46

<211> 1342

<212> DNA

<213> Homo sapiens

<220>

<223> insulin-like growth factor binding protein 2
(IGFBP-2, IBP-2) precursor

<400> 46

tatctgggtc	ccccccactg	gatgggacct	ctttgaggct	ggggactgag	tcttttcatc	60
ttcgggtgtc	ctgaatggcc	ttgctaatac	gaggggtccc	tgggcgggca	gcatcagcat	120
cacgttggag	ctcgctagcg	atgcagaatt	tccagctctc	cagggaccta	ctgcatggga	180
atctgcattt	tatcaagggt	tcctggcgca	tatttgaagt	tgcgaagctc	cacccggcag	240
cgcattgggt	gctgcaaggg	gtggctgtct	agtgcgcg	ggttgaggga	cagaaggaaa	300
gttgctggct	gcgggctcct	ccatgctctt	ctcctctctc	cccagtgcaa	gatgtctctg	360
aacgggcagc	gtggggagtg	ctggtgtgtg	aacccccaca	ccgggaagct	gatccaggga	420
gccccacca	tccgggggga	ccccgagtg	catctcttct	acaatgagca	gcaggaggct	480
cgcgggggtc	acaccagcg	gatgcagtag	accgcagcca	gccggtgcct	ggcgcccctg	540
ccccccggcc	ctctccaaac	accggcagaa	aacggagagt	gcttgggtgg	tgggtgctgg	600
aggattttcc	agttctgaca	cacgtattta	tatttggaaa	gagaccagca	ccgagctcgg	660
cacctccccg	gcctctctct	tcccagctgc	agatgccaca	cctgctcctt	cttgcttttc	720
ccgggggagg	aagggggttg	tggctcggga	gctggggtac	aggtttgggg	agggggaaga	780
gaaattttta	tttttgaacc	cctgtgtccc	ttttgcataa	gattaaagga	aggaaaagta	840
aagtgtgtgt	cttttgccctg	agtctttggg	gtcttcagg	gagagatgca	gagcctggcc	900
taggttggcc	taccgcgccat	catccagctt	tgcccctggc	tcctaggaaa	atgggaaagg	960
ccgtttccgt	ttcccattca	tgaaatggca	ataagaagga	atgggaacct	cctgaatcca	1020
gatcaaacc	tccagtgag	ccccaggact	cccaggtgag	gcttctgccc	catgtggccc	1080
ctgcctggcg	ctgtacagg	gcaggatgag	tcacgggctg	gggatgggga	gatgtggagc	1140
gtgggtccgg	cttctcctct	cgcacattca	gataacactg	cagtgggaga	taaggaacag	1200
gaaacgttgg	gattgggggt	gtctggcccc	tgaaataaag	gaggctccct	cctgccagag	1260
gtgagacatt	tccactcagc	ccccaaagaa	agggagtagg	gctgtgggta	actggccttat	1320
tcataaggat	gacaccactg	ag				1342

<210> 47

<211> 3839

<212> DNA

<213> Homo sapiens

<220>

<223> zinc finger protein 91 (ZNF91); Krueppel related
zinc finger protein; HTF10; HPF7

<400> 47

caggctctga	cttcactgct	ctgtgtcctc	tgtctccagga	ggcccagcct	gtgtggccct	60
gtgacctgca	ggtattggaa	gagccacagc	taagatgcca	ggaacccctg	gaagcctaga	120
aatgggactg	ttgacattta	gggatgtggc	catagaattc	tctccggagg	agtggcaatg	180
tctggacact	gcacagcaga	atztatatag	gaatgtgatg	ttagagaact	acagaaacct	240
ggccttctctg	ggtattgctc	tctctaagcc	agacctgatt	acttatctgg	agcaaggaaa	300
agagccctgg	aatatgaagc	aacatgagat	ggtggatgaa	cccacaggta	tatgtcctca	360
ttttcctcaa	gacttttggc	cagagcagag	catggaagat	tcttttcaaa	aagtattact	420
gagaaaatat	gaaaaatgtg	gacatgagaa	tttacagtta	agaaaagggt	gtaaaagtgt	480
ggatgagtgt	aaggtgcaca	aagaaggtta	taataaactt	aaccagtgtc	tcacaactgc	540
ccagagcaaa	gtattttcaat	gtgggaaata	tttgaaagtc	ttctataaat	ttttaaattc	600
aaacagacat	acgataagac	ataccggaaa	gaaatgcttc	aaatgtaaaa	aatgtgtcaa	660
gtcatttttg	atccgtttac	acaaaaccca	acataaatgc	gtttatatta	cagagaagtc	720
ctgtaaagt	aaagaatgtg	aaaaaacctt	tcattgggtc	tcaaccctta	ctaatacata	780
ggaaattcat	actgaagata	aaccctacaa	atgtgaagaa	tgtggcaaa	cttttaagca	840
gctctcaacc	cttactacac	ataaaataat	ctgtgctaaa	gagaaaatct	acaagtgtga	900
agaatgtggc	aaagcatttc	tatggtcctc	aaccctaact	agacataaga	ggatacacac	960
tggagagaaa	ccctacaaat	gtgaagaatg	tggcaaatgc	tttagccatt	cttcaaccct	1020
tgctaaacat	aagagaattc	atactggaga	gaaaccctac	aaatgtgaag	aatgtggcaa	1080
agcttttagc	cattcttcag	cccttgctaa	acataagaga	attcatactg	gagagaaacc	1140
ctacaaatgt	aaagaatgtg	gcaaagcttt	tagcaattcc	tcaacccttg	ctaatacata	1200
gataactcat	actgaagaga	aaccctacaa	atgtaaagaa	tgtgacaaaa	cttttaagcg	1260
actctcaacc	cttactaaac	ataaaataat	acatgctgga	gagaaaactct	acaaatgtga	1320
agaatgtggc	aaagctttta	atcgatcttc	aaatcttact	atacataagt	ttattcatac	1380
tggagagaaa	ccttacaagt	gtgaagaatg	tggcaaagca	tttaactggg	cctcaagcct	1440
tactaaacat	aaaagatttc	atactagaga	gaaacccttc	aaatgtaaag	aatgtggcaa	1500
aggatttata	tggctcttca	ccctaactag	acataagagg	atacacactg	gagagaagcc	1560
ctacaaatgt	gaagaatgtg	gcaaagcttt	taggcaatcc	tcaaccctta	ctaaacataa	1620
gataattcat	actggagaga	aaccctacaa	atttgaagaa	tgtggcaaa	cttttagaca	1680
atccttaacc	cttaataaac	ataagataat	tcatagtaga	gagaaaccct	acaaatgtaa	1740
agaatgtggc	aaagctttta	agcaattctc	aacccttact	acacataaaa	taattcatgc	1800
tggaaagaaa	ctctacaaat	gtgaagaatg	tggcaaagct	tttaatcatt	cctcaagtct	1860
ttctacacat	aagataattc	atactggaga	gaagtcttac	aagtgtgaag	aatgtggcaa	1920
agcatttcta	tggctctcaa	ccctaagaag	acataagagg	atacacactg	gagagaaacc	1980
ctacaaatgt	gaagaatgtg	gcaaagcttt	tagccattct	tcagcccttg	ctaaacataa	2040
gagaattcat	actggagaga	aaccctacaa	atgtaaagaa	tgtggcaaa	cttttagcaa	2100
ttcctcaacc	cttgctaattc	ataagataac	tcatactgaa	gagaaaccct	acaaatgtaa	2160
agaatgtgac	aaaactttta	agcgactctc	aacccttact	aaacataaaa	taatacatgc	2220
tggagagaaa	ctctacaaat	gtgaagaatg	tggcaaagct	tttaatcgat	cttcaaattct	2280
tactatacat	aagtttatct	atactggaga	gaaaccttac	aagtgtgaag	aatgtggcaa	2340
agcattttaac	tggctctcaa	gccttactaa	acataaaaaga	attcatacta	gagagaaacc	2400
cttcaaattgt	aaagaatgtg	gcaaagcatt	tatatggtct	tcaaccctaa	ctagacataa	2460
gaggatacac	actggagaga	agccctacaa	atgtgaagaa	tgtggcaaa	cttttagccg	2520
ttcctcaacc	cttactaagc	ataagacaat	tcatactgga	gagaaaccct	acaaatgtaa	2580
agaatgtggc	aaagctttta	agcactcctc	agcccttgct	aaacataaaa	taatacatgc	2640
tggagagaaa	ctctacaaat	gtgaggaatg	tggcaaagct	tttaatcaat	cttcaaattct	2700
tacgacacat	aagataattc	atactaaaga	gaaaccttcc	aagagtgaag	aatgtgacaa	2760
agcattttatc	tggctctcaa	cccttactga	acataagaga	attcatacca	gagagaaacc	2820
ctacaaatgt	gaagaatgtg	gcaaagcatt	tagccagcct	tcacacctta	ctacacataa	2880
gaggatgcac	actggagaga	aaccctacaa	atgtgaagaa	tgtggcaaa	cttttagcca	2940
atcctcaacc	cttactacac	ataagataat	tcatactgga	gagaaaccct	acaaatgtga	3000
agaatgtggc	aaagctttta	ggaaatcttc	aactcttact	gaacataaga	taattcatac	3060
tggagagaaa	ccctacaaat	gtgaagaatg	tggcaaagca	tttagccaat	cctcaaccct	3120
aactagacat	acgaggatgc	acactggaga	gaaaccatac	aaatgtgaag	aatgtgggaa	3180
agcttttaaat	cgatcctcaa	agcttactac	acataagata	attcatactg	gagagaaacc	3240
ttacaagtgt	gaagaatgtg	gcaaagcatt	tatatcatcc	tcaaccctaa	atggacataa	3300
gagaattcat	actagagaga	aaccctacaa	atgtgaagaa	tgtggcaaa	catttagcca	3360

```

atcttcaacc ctaactagac ataagaggtt gcacaccgga gagaaaccct acaaatgtgg 3420
agaatgtggc aaagccttta aagagtcctc agctcttact aaacataaga taattcacac 3480
tggagagaaa ccctacaaat gtgaaaaatg ttgcaaagcc ttaaccagt cttcaatcct 3540
tactaaccat aagaaaattc atactatcac acctgtaatc ccactacttt gggaggccga 3600
ggcgggcgga tcacgaggtc aggagatgga gaccatcctg gctaacacag tgaaacccct 3660
tctctactaa aaaatacaaa aaactagccg ggcgtggtgg cgggcgcctg tagtcccagc 3720
tatgcgagag gctgaggcag gagaatggcg tgaacccggg aggcggagct tgcagtgagc 3780
cgagatcacg ccactgcact caagcctggg cgacagagcg agactccgtc tcaaaaaaa 3839

```

```

<210> 48
<211> 1381
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> general transcription factor IIIA (GTF3A)

```

```

<400> 48
atgcgcgatc tcccggagca tgcgcagcag cggcgccgac gcggggcggt gcctggtgac 60
cgcgcgcgct cccggaagtg tgccggcgct gcgcgaaggt tcagcaggga gccgtgggcc 120
gggcgcgcgg ttcccggcac gtgtctcggc acgtggcagc gcgcctggcc ctgggcttgg 180
aggcgccggc gccctggatc cgccggccgt ggtcgccgag tcggtgtcgt ccttgaccat 240
cgccgacgcg ttcattgcag ccggcgagag ctgagctccg accccgcgcg gccccgcgct 300
tcccaggagg ttcattcgtc ccttcctga ctgcagcgcc aattacagca aagcctggaa 360
gcttgacgcg cacctgtgca agcacacggg ggagagacca tttgtttgtg actatgaagg 420
gtgtggcaag gccttcatca gggactacca tctgagcgcg cacattctga ctcacacagg 480
agaaaagccg tttgtttgtg cagccaatgg ctgtgatcaa aaattcaaca caaaatcaaa 540
cttgaagaaa cattttgaac gcaaacatga aaatcaacaa aaacaatata tatgcagttt 600
tgaagactgt aagaagacct ttaagaaaca tcagcagctg aaaatccatc agtgccagaa 660
taccaatgaa cctctattca agtgtaacca ggaaggatgt gggaaacact ttgcatcacc 720
cagcaagctg aaacgacatg ccaaggccca cgagggctat gtatgtcaaa aaggatgttc 780
ctttgtggca aaaacatgga cggaacttct gaaacatgtg agagaaaccc ataaagagga 840
aatactatgt gaagtatgcc ggaaaacatt taaacgcaaa gattacctta agcaacacat 900
gaaaactcat gcccagaaa gggatgtatg tcgctgtcca agagaaggct gtggaagaac 960
ctatacaact gtgtttaatc tccaaagcca tctcctctcc ttccatgagg aaagccgccc 1020
ttttgtgtgt gaacatgctg gctgtggcaa aacatttgca atgaaacaaa gtctcactag 1080
gcatgctgtt gtacatgatc ctgacaagaa gaaaatgaag ctcaaagtca aaaaatctcg 1140
tgaaaaacgg gagtttggcc tctcatctca gtggatatat cctcccaaaa ggaaacaagg 1200
gcaaggctta tctttgtgtc aaaacggaga gtcacccaac tgtgtggaag acaagatgct 1260
ctcgacagtt gcagtactta cccttggtta agaactgcac tgctttgttt aaaggactgc 1320
agaccaagga gtcgagcttt ctctcagagc atgcttttct ttattaaaat tactgatgca 1380
g
1381

```

```

<210> 49
<211> 952
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> sorcin CP-22 (SRI); calcium binding protein
      amplified in multidrug-resistant cells

```

```

<400> 49
gcagtctgca gcatggcgta cccggggcat cctggcgccg gcggcgggta ctaccaggc 60
gggtatggag gggctcccgg agggcctgcg ttcccggac aaactcagga tccgctgtat 120
ggttactttg ctgctgtagc tggacaggat gggcagatag atgctgatga attgcagaga 180
tgtctgacac agtctggcat tgctggagga taaaaacctt ttaacctgga gacttgccgg 240
cttatggttt caatgctgga tagagatatg tctggcacia tgggtttcaa tgaatttaaa 300
gaactctggg ctgtactgaa tggctggaga caacacttta tcagttttga cactgacagg 360
agtggaacag tagaccacaa agaattgcag aaggccctga caacaatggg atttaggttg 420
agtccccagg ctgtgaattc aattgcaaaa cgatacagca ccaatggaaa gatcaccttc 480

```

```

gacgactaca tcgcctgctg cgtcaaactg agggctctta cagacagctt tcgaagacgg 540
gatactgctc agcaagggtg tgtgaatttc ccatatgatg atttcattca atgtgtcatg 600
agtgtttaaa tcaagaggaa gctgcatgaa tgtaatcaac attccaactg gagctctcct 660
ttgcttgctc tctttgcctt cggtaatatg tataaactta catcacgact ttctcttaac 720
agctgttgta aagtttatta ctttatgtac aactgaagtt ttgttttagt ttgataata 780
aattcttgga actttaataa gatctagtct gttacaccat ttagaacttt cctcagccat 840
tatcagtcac gccttatctt cttgctaaaa ctctatgtaa atttaagtat gcaaaatggt 900
taagtcacat tattttatctt tcattgtgag atactaaaaa ctgttatcag ac 952

```

<210> 50

<211> 1360

<212> DNA

<213> Homo sapiens

<220>

<223> creatine kinase, brain; creatine kinase-B (CKB,
B-CK, CKBB)

<400> 50

```

ccgccgccat gcccttctcc aacagccaca acgcactgaa gctgcgcttc ccggccgagg 60
acgagttccc cgacctgagc gcccacaaca accacatggc caagggtgctg acccccgagc 120
tgtacgcgga gctgcgcgac aagagcacgc cgagcggctt cagcgtggac gacgtcatcc 180
agacaggcgt ggacaaccgc ggccaccgct acatcatgac cgtgggctgc gtggcgggag 240
gcgaggagtc ctacgaagtg ttcaaggatc tcttcgacct catcatcgag gaccggcacg 300
gcggctacaa gccagcgat gagcacaaga ccgacctcaa ccccgacaac ctgcagggag 360
gcgacgacct ggaccccaac tacgtgctga gctccggggg gcgcacgggc cgcagcatcc 420
gtggcttctg cctccccccg cactgcagcc gcggggagcg ccgcgccatc gagaagctcg 480
cgggtggaagc cctgtccagc ctggacggcg acctggcggg ccgatactac gcgctcaaga 540
gcatgacgga ggcgagcag cagcagctca tcgacgacca ctctctcttc gacaagcccg 600
tgtcgccctt gctgctggcc tcgggcatgg cccgcgactg gcccagcgcc cgcggtatct 660
ggcacaatga caataagacc ttcttggtgt ggtcaacga ggaggaccac ctgcgggtca 720
tctccatgca gaaggggggc aacatgaagg aggtgttcac ccgcttctgc accggcctca 780
cccagattga aactctcttc aagtctaagg actatgagtt catgtggaac cctcacctgg 840
gctacatcct cacctgcccc tccaacctgg gcaccgggct gcgggcagggt gtgcatatca 900
agctgcccac cctgggcaag catgagaagt tctcgagggt gcttaagcgg ctgcgacttc 960
agaagcgagg cacaggcggg gtggacacgg ctgcggtggg cggggtcttc gacgtctcca 1020
acgctgaccg cctgggcttc tcagagggtg agctggtgca gatggtggtg gacggagtga 1080
agctgctcat cgagatggag cagcggctgg agcagggccca ggccatcgac gacctcatgc 1140
ctgcccagaa atgaagcccg gcccacaccc gacaccagcc ctctgtcttc ctaacttatt 1200
gctggggcag tgcccacatg caccctgat gttgcccgtc tggcgagccc ttagccttgc 1260
tgtagaagga ctgtccgtca cccttggtag agtttatctt tttgatggct aagatactgc 1320
tgatgctgaa ataaactagg gttttggcct gcaaaaaaaa 1360

```

<210> 51

<211> 1910

<212> DNA

<213> Homo sapiens

<220>

<223> CCAAT/enhancer binding protein (C/EBP beta, CEBPB);
nuclear factor NF-IL6 (IL6DBP); TCF5; CRP2; LAP

<220>

<221> modified_base

<222> (1)..(1910)

<223> n = g, a, c or t

<400> 51

```

gtccttcgag tcccggcggc gcggcgaggg ggccggcggt acgcagcggg tgctacgggc 60
cgcccttata aataaccggg ctcaggagaa actttagcga gtcagagccg cgcacgggac 120
tggaaggagg acccaccgga ggggtccagg accagcccc tcactaatag cggccacccc 180

```

ggcagcggcg	gcagcagcag	cagcgacgca	gcggcgacag	ctcagagcag	ggaggccgcg	240
cacctgcggg	ccggccggag	cgggcagccc	caggccccct	ccccgggcac	ccgcgttcac	300
gcaacgcctg	gtggcctggg	acccagcatg	tctccccctg	ccgccgcgcg	cgcttgcctt	360
taaattccatg	gaagtggcca	acttctacta	cgaggcggac	tgcttggtg	ctgcgtacgg	420
cggcaaggcg	gccccgcgg	cgccccccgc	ggccagaccc	gggcccgcgc	ccccgcgcg	480
cgagctgggc	agcatcggcg	accacgagcg	ggccatcgac	ttcagcccgt	acctggagcc	540
gctgggcgcg	ccgcaggccc	cggcgcgcgc	cacggccacg	gacaccttcg	aggcggtccc	600
gccccgcgcc	gccccgcgc	ccgcctctc	cgggcagcac	cacgacttcc	tctccgacct	660
cttctccgac	gactacgggg	gcaagaactg	caagaagccg	gccgagtacg	gctacgtgag	720
cctggggcgc	ctgggggctg	ccaagggcgc	gctgcacccc	ggctgcttcg	cgccccctgca	780
cccaccgccc	ccgcgcgcgc	cgccgcccgc	cgagctcaag	gcggagcccg	gcttcgagcc	840
cgcggaactg	aagcggaagg	aggaggccgg	ggcgccgggc	ggcggcgcag	gcatggcggc	900
gggcttcccc	tacgcgtcgc	gcgcttacct	cggtaccag	gcggtgccga	gcggcagcag	960
cgggagcctc	tccacgtcct	cctcgtccag	cccgccccgc	acgccgagcc	ccgtgacgc	1020
caaggccccc	ccgaccgcct	gctacgcggg	ggcggggcgc	gcgccctcgc	aggtcaagag	1080
caaggccaag	aagaccgtgg	acaagcacag	cgacgagtac	aagatccggc	gcgagcgcaa	1140
caacatcgcc	gtgcgcaaga	gccgcgacaa	ggccaagatg	cgcaacctgg	agacgcagca	1200
caaggtcctg	gagctcacgg	ccgagaacga	gcggctgcag	agaaggtgg	agcagctgtc	1260
gcgcgagctc	agcacccctg	ggaacttggt	caagcagctg	cccgagcccc	tgctcgcctc	1320
ctccggccac	tgctagcgcg	gccccgcgcg	cgtccccctg	gggcccggccg	gggctgagac	1380
tccggggagc	gccccgcgcc	gcgccctcgc	ccccncccc	nnnnccgcaa	aactttggca	1440
ctggggcact	tggcagcngg	ggagcccgtc	ggtaatttta	atatatttat	atatatatat	1500
atctatatatt	tgccaaccaa	ccgtacatgc	agatggctcc	cgcccgtggt	gtataaagaa	1560
gaaatgtcta	tgtgtacaga	tgaatgataa	actctctgct	ctccctctgc	ccctctccag	1620
gccccggcgg	cggggcccgt	ttcgaagtgt	atgcaatcgg	tttaaacatg	gctgaacgcg	1680
tgtgtacacg	ggactgacgc	aaccacacgt	taactgtcag	ccgggccctg	agtaatcgct	1740
taaagatgtt	ctagggcttg	ttgctgttga	tgttttgttt	tgttttgttt	tttggtcttt	1800
ttttgtatta	taaaaaataa	tctatttcta	tgagaaaaga	ggcgtctgta	tattttggga	1860
atcttttccg	tttcaagcaa	ttaagaacac	ttttaataaa	cttttttttg		1910

<210> 52

<211> 2855

<212> DNA

<213> Homo sapiens

<220>

<223> cut-like 1 (CUTL1); CCAAT displacement protein (Drosophila) (CDP); CASP

<400> 52

cgtctcaata	tgtctcaaga	tgggccgcaa	tgtgggatcg	atgtttcaat	attggaagcg	60
ctttgattta	cagcagctgc	agagagaact	cgatgccacc	gcaacggtat	tggcgaaccg	120
gcaggatgaa	agtgagcagt	ccagaaagcg	gcttatcgaa	cagagccggg	agttcaagaa	180
gaacactcca	gaggatttgc	gcaagcaggt	agcgccgctg	ctgaagagtt	tccaaggaga	240
gattgatgca	ctgagtaaaa	gaagcaagga	agctgaagca	gctttcttga	atgtctacaa	300
aagattgatt	gacgtcccag	atcccgtaac	agctttggat	ctcggacagc	aactccagct	360
caaagtgcag	cgctgcacg	atattgaaac	agagaaccag	aaacttaggg	aaactctgga	420
agaatacaac	aaggaatttg	ctgaagtga	aaatcaagag	gttacgataa	aagcacttaa	480
agagaaaatc	cgagaatatg	aacagacact	gaagaaccaa	gccgaaacca	tagctcttga	540
gaaggaaacg	aagttacaga	atgactttgc	agaaaaggag	agaaaagctg	aggagacaca	600
gatgtccacc	acctcaaagc	tggaggaagc	tgagcataag	gttcagagcc	tacaaacagc	660
cctggaaaaa	actcgaacag	aattatttga	cctgaaaacc	aaatacgatg	aagaaactac	720
tgcaaaggcc	gacgagattg	aatgatcat	gacggacctt	gaaagggcaa	accagagggc	780
agaggtggct	cagagagagg	cggagacctt	aagggaacag	ctctcatcgg	ccaatcactc	840
cctccagctg	gcctcacaga	tccagaaggc	accagacgtg	gagcaggcca	tagaggtgct	900
gacctgcctc	agcctagaag	ttgagttggc	cgccaaggag	cgggagatcg	cacagctggt	960
ggaggacgtg	cagagactcc	aggccagcct	caccaagctg	cgggagaatt	cggccagcca	1020
gatctcacag	cttgagcagc	agctgagcgc	caaaaacagc	acactcaaac	aactggaaga	1080
aaaactcaaa	ggccaggctg	actatgaaga	ggtgaagaaa	gagctgaaca	ttctgaagtc	1140
catggagttt	gcaccgtccg	agggcgctgg	gacacaggat	gcggccaagc	ccctggaggt	1200
gctgttgctg	gagaagaacc	gctcgtcgca	gtccgagaac	gccgcgctgc	gcatctccaa	1260


```

cagcgacctg agcggacgct gtgcagagct gcaagtccgt atcactgagg ctgtggccac 1320
agccactgag cagagagagc tgatcgcccc cctggagcag gacctgagca tcattcagtc 1380
catccagcgg cccgatgccg aggggtgccg tgagcaccgc ctggagaaga tcccagagcc 1440
catcaaagag gccactgccc tattctacgg acctgcagca ccagccagcg gtgccctccc 1500
agagggccag gtggattcac tgctttccat catctccagc cagagggagc gcttccgtgc 1560
ccggaaccag gagcttgagg ccgagaaccg cctggcccag cacaccctcc aggccctgca 1620
gagtgaagctg gacagcctgc gcgccgacaa catcaagctc tttgagaaga tcaagttcct 1680
gcagagctac cctggccggg gcagcggcag tgatgacacg gagctgcggt actcgtccca 1740
gtacgaggag cgccctggacc ctttctcctc cttcagcaag cgggagcggc agaggaagta 1800
cctgagcttg agtccctggg acaaggccac cctcagcatg gggcgtctgg ttctctccaa 1860
caagatggcg cgcaccatcg gcttcttcta cacactgttc ctgcaactgcc tgggtcttcc 1920
ggtgctctac aagctggcat ggagcgagag catggagagg gactgtgcca ctttctgcgc 1980
caagaagctc gctgaccacc tgcacaagtt ccacgagaat gacaacgggg ctgcggtgg 2040
tgacttggtg cagtataacc ccggggcctc ccccgtagaa gtgacggctg cgccctccacc 2100
ccgactgctc agtgcattta atcacttaga ctccctgaa gaatccccc tggaaactgc 2160
ccttatccgc tgtccagcag ctgccagagg ccccaggta cctcggtcc cctgaaaga 2220
atgtctcggt cacatcaggc ccgctaggtc cagagagcga gcccacaatg cccggccagg 2280
ctaagccgca gagaccctct cagccccac ctcaggttag ggctctgccc gcagcctgac 2340
ctctagccct ggtggcagag gtccctcagc tgcgaggcta attgggtgac caccgattcc 2400
agctgcggtt aatccagctt gggcctgtct gcaactgcga cctcttggg tctcctagga 2460
tcccccatg ccccgtaaga ggtggaagac gcttccttcc aggacagcag gctttggagt 2520
ccgacacccc cagcctgcct ttgccaccag ccccaaccct gcagagatat gaggcttgac 2580
agagtctgcc cctccccc cctgaccccc agagagagag ccccagccag cggaacagtt 2640
tctattaccc cctccctgcc ccagagccca tgtgatttct gctttcttct ttagcaagat 2700
attctggttt ctagataagg aagagtctct aatgagcccc cgagccccag tctcttcaga 2760
ctcatggatt ggtctgaggg gtctgaacgt ctctagcca atcagaactg gctgtggacc 2820
accctagcac ggccacctct cagggcactg gcagg 2855

```

<210> 53

<211> 607

<212> DNA

<213> Homo sapiens

<220>

<223> DNA-directed RNA polymerase II polypeptide J, transcript
variant a (POLR2J, RPO2); hRPB14; RPB11, hSRPB11

<400> 53

```

tgaattcgtg ggtggcggcg gcggcggacc cttgggtgtc ggacgcgacg gcggcgggac 60
gatgaacgcc cctccagcct tcgagtcggt cttgctcttc gagggcgaga agaagatcac 120
cattaacaag gacaccaagg tacccaatgc ctgtttattc accatcaaca aagaagacca 180
cacactggga aacatcatta aatcacaact cctaaaagac ccgcaagtgc tatttgctgg 240
ctacaaagtc cccaccccct tggagcacia gatcatcatc cgagtgcaga ccacgccgga 300
ctacagcccc caggaagcct ttaccaacgc catcaccgac ctcatcagt agctgtccct 360
gctggaggag cgctttcggg tggccataaa agacaagcag gaaggaattg agtagggggc 420
agagggggct ctgctcggcc tgtgagcccc gtctctacct gtgcctgacc ctccgctcca 480
ggtaccacac cgaggagagc ggccggtccc agccatggcc cgcttctgtg ccacccctca 540
ccctgacacc gacgtgtcct gtacatagat taggttttat attcctaata aagtatagcg 600
gaagaga 607

```

<210> 54

<211> 1578

<212> DNA

<213> Homo sapiens

<220>

<223> TATA box binding protein (TBP)-associated factor;
transcription factor SL1; RNA polymerase I, A 48kD (TAF1A,
TAFI48, RAFI48)

<400> 54
attccaagct aaatttaggc gggatatgagt gattttcagtg aagaattaaa agggcctgtg 60
acagatgatg aagaagtggg aacatctgtg ctccagtggg caggaatgca ttttccttgg 120
cttcaaacat acgtagaaac tgtggccatt ggagggaaaa ggaggaagga ttttgctcag 180
acaacaagtg cttgttttaag ttttatccaa gaagctctgc tgaagcacca atggcagcaa 240
gctgcagaat acatgtacag ttattttcag accttggag attcagatag ctacaaaagg 300
caggctgcac ctgagattat ttggaagctc ggaagtgaaa ttctatttta tcatcccaa 360
agcaacatgg agagtttcaa tacttttgc aaccggatga aaaatatttg cgtcatgaat 420
tatttaaaga tctccttaca acatgcatta taccttctgc atcatggaat gcttaaagat 480
gctaagagaa atctgagtga ggacagagaca tggagacatg gtgaaaatac gtcttcccgg 540
gaaatattaa tcaaccttat tcaggcctat aaagggcttt tacagtatta tacctggtct 600
gaaaagaaga tggaattgtc aaagcttgat aaggatgatt atgcttacia tgcagtagcc 660
caggatgtgt tcaaccacag ctggaagaca tctgcaataa tttctgcatt gattaaaatt 720
cctggagttt gggacccttt tgtgaagagt tatgtagaaa tgctggaatt ctatggggat 780
cgagatggag cccaagaggt actcaccaat tatgcataat atgaaaagtt tccatcaaat 840
ccaaatgccc atatctactt atacaacttt ctaaagagac agaaggcacc aagatcaaaa 900
ttgataagtg tgcttaagat tttgtatcag attgtacat ctcataaatt gatgttgaa 960
ttccatacat tacttagaaa atcagaaaaa gaagaacacc gtaaaactgg gttggaggta 1020
ttatttggag tcttagattt tgccggatgc actaagaata taactgcttg gaaatacttg 1080
gcaaaatatc tgaaaaatat cttaatggga aaccaccttg cgtgggttca agaagagtgg 1140
aactccagga aaaactgggt gccagggttt catttcagct acttttgggc aaaaagtgat 1200
tggaaggaag atacagcttt ggctgtgag aaagcttttg tggctggttt actgttagga 1260
aaaggttgta gatatttccg gtatatttta aagcaagatc accaaatctt agggagaaa 1320
attaagcgga tgaagagatc tgtgaaaaaa tacagtattg taaatccaag actctgatac 1380
tgaatttttag ttatttcaca gttgtagcta cacagtaagt agcttggtag atagtattg 1440
aatgtattta tgtagtgtat taagaagctt atattactac aaaaaactta tttttatata 1500
tttttatatt tttgtattat ttatagctag agaaacaata ttactgcctt tgctctttgt 1560
aactatgtct gttttctt 1578

<210> 55

<211> 927

<212> DNA

<213> Homo sapiens

<220>

<223> epithelial protein up-regulated in carcinoma
(DD96); membrane associated protein 17 (MAP17);
PDZK1 interacting protein 1 (PDZK1IP1)

<400> 55

ggaagtttag gttaactgtc ttaaatttcc aaagctgtaa tcattatttt cattctcaaa 60
gtgatggcct tgtgttttgc tcctctctc caggccaga ctgagccag gttgatttca 120
ggcggacacc aatagactcc acagcagctc caggagccca gacaccggcg gccagaagca 180
aggctaggag ctgctgcagc catgtcggcc ctccagcctc tcattctggg cctgctcagc 240
gcagtgccac ctgccagctg tcagcaaggc ctggggaacc ttcagccctg gatgcagggc 300
cttatcgcg tggcgtgtt cctggctctc gttgcaatcg cctttgcagt caaccacttc 360
tggtgccagg aggagccgga gcctgcacac atgatcctga ccgtcggaaa caaggcagat 420
ggagtcctgg tgggaacaga tggaaggtac tcttcgatgg cggccagttt cagggtccag 480
gagcatgaga atgcctatga gaatgtgcc gaggaggaag gcaaggtccg cagcaccctg 540
atgtaacctt ctctgtggct ccaaccccaa gactccagg cacatgggat ggatgtccag 600
tgctaccacc caagccccct ccttctttgt gtggaatctg caatagtggg ctgactccct 660
ccagcccat gccggcccta ccgccttg aagtatagcc agccaagggt ggagctcaga 720
ccgtgtctag gttggggctc ggctgtggcc ctggggtctc ctgctcagct cagaagagcc 780
ttctggagag gacagtcagc tgagcacctc ccctcctgct cacacgtcct tccccataac 840
tatggaaatg gccctaattt ctgtgaaata aagacttttt gtatttctgg ggctgaggct 900
cagcaacagc ccctcaggct tccaaaa 927

<210> 56

<211> 595

<212> DNA

<213> Homo sapiens

<220>
 <223> calgizzarin; S100 calcium binding protein A11
 (S100A11); protein S100C; MLN 70

<400> 56
 gggcaaggct gggccgggaa gggcgtgggt tgaggagagc ctccagaccc gcacgccgcg 60
 cgcacagagc tctcagcgcc gctcccagcc acagcctccc gcgcctcgct cagctccaac 120
 atggcaaaaa tctccagccc tacagagact gagcggtgca tcgagtcctt gattgctgtc 180
 ttccagaagt atgctggaaa ggatgggttat aactacactc tctccaagac agagttccta 240
 agcttcatga atacagaact agctgccttc acaaagaacc agaaggaccc tgggtgtcctt 300
 gaccgcatga tgaagaaact ggacaccaac agtgatgggc agctagattt ctcagaattt 360
 cttaatctga ttggtggcct agctatggct tgccatgact ccttcctcaa ggctgtccct 420
 tcccagaagc ggacctgagg accccttggc cctggccttc aaaccacccc cctttccttc 480
 cagcctttct gtcacatct ccacagccca cccatcccct gagcacacta accacctcat 540
 gcaggcccca cctgcccaata gtaataaagc aatgtcactt ttttaaaaca tgaaa 595

<210> 57
 <211> 1433
 <212> DNA
 <213> Homo sapiens

<220>
 <223> down-regulated in rhabdomyosarcoma LIM protein
 (DRAL); four and a half LIM domains protein 2
 (FHL-2); skeletal muscle LIM-protein 3 (SLIM 3);
 aging associated gene 11 (AAG11)

<400> 57
 cgcagccacc agccgccccg gccctccagc cccgtccggg agtccccggc ccgctgcggt 60
 gcttggtgta gaactgtgtc ttcttgaga ctaggctggc attttgactt tggggttgct 120
 gaaaagccag gactcaaaat gactgagcgc tttgactgcc accattgcaa cgaatctctc 180
 tttggcaaga agtacatcct gcgggaggag agccccact gcgtggtgtg ctttgagacc 240
 ctgttcgcca acacctgcga ggagtgtggg aagcccatcg gctgtgactg caaggacttg 300
 tcttacaagg accggcactg gcatgaagcc tgtttccact gctcgcaagt cagaaactca 360
 ctggtggaca agccctttgc tgccaaggag gaccagctgc tctgtacaga ctgctattcc 420
 aacgagtact catccaagt ccaggaatgc aagaagacca tcatgccagg taccgcaag 480
 atggagtaca agggcagcag ctggcatgag acctgcttca tctgccaccg ctgccagcag 540
 ccaattggaa ccaagagttt catcccaaaa gacaatcaga atttctgtgt gccctgctat 600
 gagaaacaac atgccatgca gtgcgttcag tgcaaaaagc ccatcaccac gggaggggtc 660
 acttaccggg agcagccctg gcacaaggag tgcttcgtgt gcaccgcctg caggaagcag 720
 ctgtctgggc agcgttcac agctcgcgat gactttgcct actgcctgaa ctgcttctgt 780
 gacttgatg ccaagaagtg tgctgggtgc accaaccaca tcagcggact tgggtggaca 840
 aaatacatct cctttgagga acggcagtgg cataacgact gctttaactg taagaagtgc 900
 tccctctcac tgggtggggcg tggcttcctc acagagaggg acgacatcct gtgccccgac 960
 tgtgggaaag acatctgaat tcaacacaga gaagttgctg cttgtgatct cacacacaga 1020
 tttttatggt ttctttctca ccaggcaat cttgccttct ggtttcttcc agccacattg 1080
 agactttctt ctagtgtttt tcagtgtatc tcacgtttgc ttaaaccctt tagtgctttg 1140
 tgatagttca gtcccaggga aagagaaaac tcgccctagg ccctaggtgg gaagatgggt 1200
 tgaaattttt gtaatcgagt aaggcacacc caaatgtaa aatccttttg aatgatgcct 1260
 ttataaatct ttctctcact gtctatttaa gtgcaattaa catatgtcac gaacttgaaa 1320
 gttttctaaa ctcaataagg taatgaccag ttgttattta cagctctgta acctccggtt 1380
 gcgtcaagtc taaaccaaga ttatgtgact tgcaataaag ttattcagaa cag 1433

<210> 58
 <211> 2416
 <212> DNA
 <213> Homo sapiens

<220>

<223> MAX interacting protein 1 (MXI1); MAX interactor 1
tumor suppressor; Max-related transcription
factor; MAX dimerization protein 2

<400> 58

```
agattatgat cgcttgaggc ccctctccta ccagataacc gatgttatac tgatgtgttt 60
ttcctttttt tttttttttt tttaagtaat taagggtagt taaattatth aaagtataca 120
aagtccaaac agccaggggt aaggtctcca agaggccttc ccagggttaag ggagtgcgga 180
gagggcccg tgcgcccccg cgggtgccat ggagcgggtg aagatgatca acgtgcagcg 240
tctgctggag gctgccgagt ttttgagcgc cggggagcga gagtgtgaac atggctacgc 300
ctcttcattc ccgtccatgc cgagcccccg actgcagcat tcaaagcccc cacggaggtt 360
gagccgggga cagaaacaca gcagcgggac gagcaacacc agcactgcca acagatctac 420
acacaatgag ctggaaaaga atcgacgagc tcatctgcgc ctttgtttag aacgcttaaa 480
agttctgatt ccactaggac cagactgcac ccggcacaca acacttggtt tgctcaacaa 540
agccaaagca cacatcaaga aacttgaaga agctgaaaga aaaagccagc accagctcga 600
gaatttgga cgagaacaga gatttttaaa gtggcgactg gaacagctgc agggctctca 660
ggagatggaa cgaatacgaa tggacagcat tggatcaact atttcttcag atcggtctga 720
ttcagagcga gaggagattg aagtggatgt tgaaagcaca gaggttctcc atggagaagt 780
ggacaatata agtaccacca gcatcagtga cattgatgac cacagcagcc tgccgagtat 840
tgaggagtgc gagggttact ccagtgccag tgtcaaaact tcatcactt catagaaccc 900
agcatgacat aacagtgcag ggcaaaaat tcaactgggc aattcaatac aaacaatctc 960
ttaaattggg ttcattgatc agtctcctct ttaaaacaaa acaaaacaaa acaaaactat 1020
acttgaacaa aagggtcaga ggacctgtat ttaagcaaat acttagcaaa aagtggggca 1080
gagctcccaa ggagaacaaa tattcagaat attcatattg gaaaaatcac aatttttaat 1140
ggcagcagaa aacttgtgtg aaattttctt gatttgagtt gattgagaag aggacattgg 1200
agatgccatc ctctttctct tttctcgttt gctcatacta cattgagtag acacatttaa 1260
ggatgggggt atgaaccctt cctgagcttt atggctcctaa aagcaaaata aaaactattc 1320
gaatgaaaag acaagaaaat cagggtattaa tcttgatag ctaataatga gctattaaaa 1380
ctcagcctgg gacagtttat catgaagcct gtggatgac aatcctttat tattatthtt 1440
tttttttgaa aaaagctcat ttcattgctt gcaaaaggag agactcccat gaagcctttt 1500
gaaagggatc atcatgcagc tcaactttct gttggattcc atgctaagca agctaaccct 1560
atcctgcatt gttagcacta ggcaaccagc tgccacctct ccactctgct gcccttaggc 1620
cacatgggag cagtccatgc atgacagcct ctatcctaca aggcctatga gtatggattg 1680
ggggggccaa aaggaaaaag ctccatgtgc ctctttgtct gcgtgggtca gaagagttgt 1740
gcacgcagat tagcaggcca aggtctgagc cacagcagca tttttatttc agatthttgat 1800
aactgtttat atgtgttgaa aacaaaaatg acatcttttt aaagcttatt cataaaaaaa 1860
aatagatgtc ttttatagtg gaaaaacaca tggggaaaaa aatcatctat tttgatgcag 1920
catttgataa tgataaaaaca cctcacacct cactctttat agtgacacaa atgaatgagg 1980
tctgggctag ttagaaaaag ggtcaatgtc atttttgtht ttagaatcat tacctthttac 2040
cagctthttaa ccatctgata tctatagtag acacatac atagthtaaa tagthtaagt 2100
cagcacttgt ctcatthtaa tgtaaagatt tgcttccatt ttcctacagg cagtctctct 2160
cttctcaca gtcccactgt gcaggtgcta ttgttactct tacgaatatt ttcagtaagt 2220
ttatthttct ctaagtgaat tttctagcct gcactthgat gtcattgtgt cctthttgtc 2280
ttcaaacctc aaggttcccc tgtggccctc tcccttacct tgggaaggcc tcttgagagc 2340
cttacccttg gctgtthtga ctttgtatata ttaataaat ttaactacct ttaattactt 2400
aaaaaaaaa aaaaaa 2416
```

<210> 59

<211> 2881

<212> DNA

<213> Homo sapiens

<220>

<223> colon mucosa-associated down-regulated in adenoma
(DRA); solute carrier family 26, member 3
(SLC26A3); chloride anion exchanger; congenital
chloride diarrhea

<400> 59

```
atccactcag gtctacaggc tcttagaact agaacttaga actthtatctt gaaaatgtac 60
```

```

cactgttgca gaagctcctc acagagtatg tgtcaggcat ttttaacctg ctaaaggcaa 120
gaagaagtgt tcaccacata gttgcaaagg tcttcaactt gccacagcca acagaaaaat 180
caaaatgatt gaaccctttg ggaatcagta tattgtggcc aggccagtgt attctacaaa 240
tgcttttgag gaaaatcata aaaagacagg aagacatcat aagacatttc tggatcatct 300
caaagtgtgt tgtagctgtt cccacaaaaa ggccaagaga attgtcctct ctttgttccc 360
catagcatct tggttgccag cataccggct taaagaatgg ttgctcagtg atattgtttc 420
tggtatcagc acagggattg tggccgtact acaaggttta gcatttgctc tgctggctga 480
cattccccca gtctatgggt tgtatgcata ctttttccca gccataatct accttttctt 540
cggcacttcc agacacatat ccgtgggtcc gtttccgatt ctgagtatga tgggtgggact 600
agcagtttca ggagcagttt caaaagcagt cccagatcgc aatgcaacta ctttgggatt 660
gcctaacaac tcgaataatt cttcactact ggaatgacag aggggtgaggg tggcggcggc 720
ggcatcagtc acagtgcctt ctggaatcat ccagttggct tttgggattc tgcggttgg 780
atltgtagt atatacctgt ctgagtcctt catcagtgcc ttcactactg ctgctgtctg 840
tcatgttttg gtttcccaac tcaaattcat ttttcagttg acagtcccgt cacacactga 900
tccagtttca attttcaaag tactatactc tgtattctca caaatagaga agactaatat 960
tgcagacctg gtgacagctc tgattgtcct tttgggttga tccattgtta aagaaataaa 1020
tcagcgcttc aaagacaaac ttccagtgcc cattccaatc gaattcatta tgaccgtgat 1080
tgcagcaggt gtatcctacg gctgtgactt taaaaacagg tttaaagtgg ctgtggttgg 1140
ggacatgaat cctggatttc agccccctat tacacctgac gtggagactt tccaaaacac 1200
cgtaggagat tgcttcggga tcgcaatggt tgcatttgca gtggcctttt cagttgccag 1260
cgtctatttc ctcaaatacg attatccact tgatggcaat caggagttaa tagccttggg 1320
actgggtaac atagtctgtg gagtattcag aggatttgcg gggagtactg ccctctccag 1380
atcagcagtt caggagagca caggaggcaa aacacagatt gctgggctta ttggtgccat 1440
catcgtgctg attgtcgttc tagccattgg atttctcctg gcgcctctac aaaagtccgt 1500
cctggcagct ttagcattgg gaaacttaaa gggaatgctg atgcagtttg ctgaaatagg 1560
cagattgttg cgaaaggaca aatatgattg ttttaatttg atcatgacct tcatcttcac 1620
cattgtcctg ggactcgggt taggcctggc agctagtgtg gcatttcaac tgctaaccat 1680
cgtgttcagg acctaatctt caaaatgcag cacgctggct aatattggaa gaaccaacat 1740
ctataagaat aaaaaagatt attatgatat gtatgagcca gaaggagtga aaattttcag 1800
atgtccatct cctatctact ttgcaaactt tggtttcttt aggcggaaac ttatcgatgc 1860
tgttggtttt agtccacttc gaattctacg caagcgcaac aaagctttga ggaaaatccg 1920
aaaactgcag aagcaaggct tgctacaagt gacacaaaaa ggatttataat gtactgttga 1980
caccataaaa gattctgacg aagagctgga caacaatcag atagaagtac tggaccagcc 2040
aatcaatacc acagacctgc ctttccacat tgactggaat gatgatcttc ctctcaacat 2100
tgaggtcccc aaaatcagcc tccacagcct cattctcgac ttttcagcag tgcctttct 2160
tgatgtttct tcagtggagg gccttaaatc gattttgcaa gaatttatca ggatcaagg 2220
agatgtgtat atcgttgga ctgatgatga cttcattgag aagcttaacc ggtatgaatt 2280
ttttgatggg gaagtgaata gctcaatatt tttcttaaca atccatgatg ctgttttgca 2340
tattttgatg aagaaagatt acagtacttc aaagttaaat ccagtcagg aaaaagatgg 2400
aaaaattgat tttaccataa atacaaatgg aggattacgt aatcggtat atgaggtgcc 2460
agttgaaaca aaattctaata caacatataa ttcagaagga tcttcatctg actatgacat 2520
aaaaacaact ttataccag aaagttattg ataagttcat acattgtacg aagagtattt 2580
ttgacagaat atgtttcaaa ctttggaaca agatggttct agcatggcat atttttcaca 2640
tatctagtat gaaattatat aagtattcta aattttatat cttgtagctt tatcaaagg 2700
tgaaaattat tttgttcata catatttttg tagcactgac agatttccat ctagtccact 2760
accttcatgc ataggtttag cagtatagtg gcgccactgt tttgaatctc ataatttata 2820
caggtcatat taatatattt ccattaaaaa atcagttgta cagtgaaaaa aaaaaagaaa 2880
a
2881

```

```

<210> 60
<211> 1429
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> selenium-binding protein 1 (hSBP, SELENBP1); SP56, HSP56;
LPSB

```

```

<400> 60
cagcatggct acgaaatgtg ggaattgtgg acccggtac tccaccctc tggaggccat 60
gaaaggaccc aggaagaga tcgtctacct gccctgcatt taccgaaaca caggcactga 120

```

ggccccagat	tatctggcca	ctgtggatgt	tgaccccaag	tctccccagt	attgccaggt	180
catccaccgg	ctgcccattg	ccaacctgaa	ggacgagctg	catcactcag	gatggaacac	240
ctacagcagc	tgtctcggtg	atagcaccaa	gtcgcgcaac	aagctggtct	tgcccagtct	300
catctcctct	cgcattctatg	tggtaggacgt	gggtctctgag	ccggggcccc	aaaagctgca	360
caaggtcatt	gagcccaagg	acatccatgc	caagtgcgaa	ctggcctgtc	tccacaccag	420
ccactgcctg	gccagcgggg	aagtgatgat	cagctccctg	ggggacgtca	agggcaatgg	480
caaagggggg	tttgtgctgc	tggatgggga	gacgttcgag	gtgaagggga	catgggagag	540
acctgggggt	gctgcaccgt	tgggctatga	cttctggtac	cagcctcgac	acaatgtcat	600
gatcagcact	gagtgggag	ctcccaatgt	cttacgagat	ggctttaacc	ccgctgatgt	660
ggaggctgga	ctgtacggga	gccacttata	tgtatgggac	tggcagcgcc	atgagattgt	720
gcagaccctg	tctctaaaag	atgggctgat	acccttggag	atccgcttcc	tgcacaaccc	780
aagtgccacc	cagggttttg	taggctgtgc	ctcagctcca	aacatccagc	gcttctacaa	840
aacgagggaa	ggtacatggt	cagtggagaa	ggtgatccag	gtgcccccca	agaaagtgaa	900
gggctggctg	ctgccagggg	tgccaggcct	gatcaccgac	atcctgctct	ccctggacga	960
ccgcttctct	tacttcagca	actggctgca	tggggacctg	aggcagtatg	acatctctga	1020
cccacagaga	ccccgcctca	caggacagct	cttcctcgga	ggcagcattg	ttaagggagg	1080
ccctgtgcaa	gtgctggagg	acgaggaact	aaagtcccag	ccagagcccc	tagtgggtcaa	1140
gggaaaacgg	gtggctggag	gccctcagat	gatccagctc	agcctggatg	gcaagcgctt	1200
ctacatcacc	acgtcgctgt	acagtgcctg	ggaaaagcag	ttttaccctg	atctcatcag	1260
ggaaggctct	gtaatgctgc	aggttgatgt	agacacagta	aaaggagggc	tgaagttgaa	1320
cccgaactgc	ctgggtggact	tcggaagga	gccccttggc	ccagccctgg	ctcacgagct	1380
tcgctaccct	gggggcgatt	gtagctctga	catctggatt	tgaaggctc		1429

<210> 61

<211> 1104

<212> DNA

<213> Homo sapiens

<220>

<223> MHC class II HLA-DP light chain

<400> 61

tgcagcacct	atttccaatt	gtgtatggcc	tcgagtacca	ggtctcgctt	ccaggatggt	60
cctgcaggtt	tctgcgggcc	cccgacagct	ggctctgacg	gcgttactga	tgggtgctgt	120
cacatctgtg	gtccaaggca	gggccaactcc	agagaattac	gtgcaccagt	tacggcagga	180
atgctacggc	tttaattggga	cacagcgctt	cctagagagt	tacatctaca	accgggagga	240
gttcgtgctg	ttcgacagcg	acgtggggga	gttcggggcg	gtgacggagc	tggggcggcc	300
tgatgaggac	tactggaaca	gccagaagga	catcctggag	gaggagcggg	cagtgccgga	360
cagggtatgc	agacgcaact	acgagctgga	cgaggccgtg	accctgcagc	gccgagtcca	420
gcctaagggtg	aacgtttccc	cctccaagaa	ggggcccctg	cagcaccaca	acctgcttgt	480
ctgccacgtg	acagattttct	acccaagcag	cattcaagtc	cgatgggttc	tgaatggaca	540
ggaggaaaca	gctggggctg	tgtccaccaa	cctgatccgt	aatggagact	ggaccttcca	600
gaccttggtg	atgctggaaa	tgacccccca	gcaggagagc	gtctacatct	gccaagtgga	660
gcacaccagc	ctggacagtc	ctgtcaccgt	ggagtggaa	gcacagtctg	attctgcccc	720
gagtaagaca	ttgacgggag	ctgggggctt	cgtgctgggg	ctcatcatct	gtggagtggg	780
catcttcatg	cacaggagga	gcaagaaagt	tcaacgagga	tctgcataaa	cagggttcct	840
gacctcaccg	aaaagactaa	tgtgccttag	aacaagcatt	tgtgtgtttt	tgttaagtag	900
tggttccagg	acagaccctc	agcttcccaa	gaggaaactg	ctgccaagaa	gttgctctga	960
aggcagtttc	tatcgtttctg	cgctttgatt	caaagcactg	tttctctcac	tgggcctcca	1020
accatgttcc	cttcttctta	gcaccacaaa	taatcaaaac	ccaacataag	tgtttgtttt	1080
ccttttaaaa	tatgcatcaa	aaaa				1104

<210> 62

<211> 282

<212> DNA

<213> Homo sapiens

<220>

<223> MHC class II HLA-DR beta 1 chain precursor
(HLA-DRB4)

```

<400> 62
tccatcctaa ggtgactgtg tatccttcaa agaccagcc cctgcagcac cataacctcc 60
tggtctgttc tgtgagtggg ttctatccag gcagcattga agtcaggtgg ttccggaatg 120
gccaggaaga gaagactggg gtggtgtcca caggcctgat ccacaatgga gactggacct 180
tccagaccct ggtgatgctg gaaacagttc ctcggagtgg agaggtttac acctgccaaag 240
tggagcaccc aagcgtgaca agccctctca cagtggaatg ga 282

<210> 63
<211> 213
<212> DNA
<213> Homo sapiens

<220>
<223> MHC HLA class II DG; HLA-DR gamma chain; CD74
antigen

<400> 63
ccaccgaaag tactgaccaa gtgccaggaa gaggtcagcc acatccctgc tgtccacccg 60
ggttcattca ggcccaagtg cgacgagaac ggcaactatc tgccactcca gtgctatggg 120
agcatcggct actgctgggtg tgtcttcccc aacggcacgg aggtccccaa caccagaagc 180
cgcgggcacc ataactgcag tgagtcactg gaa 213

<210> 64
<211> 1191
<212> DNA
<213> Homo sapiens

<220>
<223> MHC HLA class II DR beta-1 chain (HLA-DRB1)

<400> 64
gcccagtat caagagggag agtgagactt gcctgcttct ctggcccctg gtccctgtcct 60
gttctccagc atggtgtgtc tgaagctccc tggaggctcc tgcattgacag cgctgacagt 120
gacactgatg gtgctgagct cccactggc tttggctggg gacacccgac cacgtttctt 180
gtggcagctt aagtttgaat gtcatttctt caatgggacg gagcgggtgc ggttgctgga 240
aagatgcatc tataaccaag aggagtccgt gcgcttcgac agcgacgtgg gggagtaccg 300
ggcgtgacg gagctggggc ggctgatgc cgagtactgg aacagccaga aggacatcct 360
ggaagacgag cgggccgagg tggacacctt ctgcagacac aactacgggg ttggtgagag 420
cttcacagtg cagcggcgag ttgagccta ggtgactgtg tatccttcaa agaccagcc 480
cctgcagcac cacaacctcc tggctgtctc tgtgagtggg ttctatccag gcagcattga 540
agtcaggtgg ttccggaacg gccaggaaga gaaggctggg gtggtgtcca caggcctgat 600
ccagaatgga gattggacct tccagaccct ggtgatgctg gaaacagttc ctcggagtgg 660
agaggtttac acctgccaa tggagcaccc aagtgtgacg agccctctca cagtggaatg 720
gagagcacgg tctgaatctg cacagagcaa gatgctgagt ggagtcgggg gcttcgtgct 780
gggcctgctc ttccttgggg ccgggctgtt catctacttc aggaatcaga aaggacactc 840
tggaacttcag ccaacaggat tcctgagctg aaatgcagat gaccacattc aaggaagaac 900
cttctgtccc agctttgcag aatgaaaagc tttcctgctt ggcagttatt cttccacaag 960
agagggcttt ctcaggacct ggttgctact gggtcggcaa ctgcagaaaa tgcctccct 1020
tgtggcttcc tcagctcctg cccttggcct gaagtcccag cattgatgac agcgcctcat 1080
cttcaacttt tgtgtctccc tttgcctaaa ccgtatggc tcccgtgcat ctgtacctca 1140
ccctgtacga caaacacatt acattattaa atgtttctca aagatggagt t 1191

<210> 65
<211> 5724
<212> DNA
<213> Homo sapiens

<220>
<223> MHC HLA class II DR alpha heavy chain (HLA-DRA)

```

<400> 65

agtactgcca	aattcgagac	aatctccatg	acctgacaat	ttaccttcta	tttgggtaat	60
ttattgtccc	ttacgcaaac	tctccaactg	tcattgcaca	gacatatgat	ctgtatttag	120
ctctcacttt	agggtgttcc	attgattcta	ttctcactaa	tgtgcttcag	gtatatccct	180
gtctagaagt	cagattgggg	ttaaagagtc	tgtccgtgat	tgactaacag	tcttaaatac	240
ttgatttggt	gttggtgttg	tcctgtttgt	ttaagaactt	tacttcttta	tccaatgaac	300
ggagtatctt	gtgtcctgga	ccctttgcaa	gaacccttcc	cctagcaaca	gatgcgtcat	360
ctcaaaatat	ttttctgatt	ggccaaagag	taattgattt	gcattttaat	ggtcagactc	420
tattacaccc	cacattctct	tttcttttat	tcttgtctgt	tctgcctcac	ccccgagctc	480
tactgactcc	caaaagagcg	cccaagaaga	aaatggccat	aagtggagtc	cctgtgctag	540
gatttttcat	catagctgtg	ctgatgagcg	ctcaggaatc	atgggctatc	aaaggtaggt	600
gctgagggaa	tgaaatctgg	gacgatagac	tacgaagcat	tgagagaaag	acctatggac	660
atttggaaga	taatgtgtgg	agtgaagaa	tagtgtgaca	ggtattatgt	ggtctcgaca	720
gaaagtataa	caaattgtgg	tttggtggag	tttctccctc	accacaaact	gaagtaagtc	780
aaatttggtt	tagagggcca	aaactgagtt	gtgtattgat	gaatagcacg	gtcctgctac	840
aagccaaact	gggggtgggg	gtgggggtgg	gggaggaaga	atattttctg	gcaagcatta	900
acaagttata	tttctgggct	ttaattattc	tttctggaaa	attagtaaaa	ttaaaaacta	960
aaaaccacac	atagttttgt	tagaattaaa	tgaaaaaaaa	agttatttagc	cctgttctta	1020
tctgaatata	tgatacagta	gttatttttt	ggagtgtaaa	tctgtgcggt	atatattgag	1080
cacatatatt	gtgttgaaaga	ttactagaag	gaaaagtcac	caaaaagcaa	caattttacc	1140
caggaaaagg	ggaggggaagg	catgctgata	tgagttgcct	catgggacag	tgatagccat	1200
tccctgcctt	cccctctcca	tggtacagca	gatcttatac	catgttaact	tagtaatat	1260
tccaagagag	tagaaaaata	agtaaggaaa	tggggaatct	gatattattg	tctctcatct	1320
ccagagcaac	attggtgctg	ttgtaaagat	gtactgtaga	aaagtattct	tcaccgacg	1380
tgacccccac	agaaggtgtc	aggtagactt	ggaataagca	aagtaataac	ccagctccca	1440
tacccatagt	ggcaattgta	gatttctatt	gccccaaaag	agccatacat	agggatactt	1500
acctagaaaag	acagaggatc	ttcccttggt	ttgtgaagag	gcagctagta	tatttgtgtg	1560
tgtttgcata	gatggaagta	aataaattcc	taggtttatc	aatacacagt	caaacattta	1620
aaatctctca	tcttggtctg	gcacggtggc	tcacgctaac	cccagcactt	tgggaggccg	1680
aggcgggcgg	atcacgaggt	caagagatcg	agaccgtcct	gggcaacatg	gtgaaacccc	1740
gtctctacta	aataacaaaa	aattagcttg	glatggtggc	acacgcctgt	agtcccagct	1800
actcgggagg	ctagaggcag	aggattgctt	ggccgggag	gcggagggtg	cagtgaagctg	1860
agatggtgcc	actgcactcc	agcctggcga	tagagcaaga	ctccgtctca	aacaacaaa	1920
ccaaaacaaa	acaaaatata	tcaccttata	tttgaagact	aaggaaaaaa	aaaatctccc	1980
actcatcgat	acactccaca	gaggcagcat	actctcccag	tgtagctttc	tcttttcatg	2040
ttcattattc	ccttggtgtt	ggttattctc	aatgtcaatc	gtaacagaa	atcttccata	2100
ataacagtc	caattttaag	agcattaaga	taaaagggtg	aattgccaag	gtcaatccag	2160
acgagaacct	tctcatagag	gtaaccaccg	tgtgggtttg	gatgctggga	agcaggggga	2220
ctatgacgct	acaaggtctc	agtcttaatt	tttgagtagc	ttcagtcctc	aggatatatt	2280
tccatagatt	tggcccttaa	ataaaaaaga	gcttctgact	ctaaaaatga	aacagtgcct	2340
gttacagtc	gttgatata	ttaagaaatt	actcacctta	tctcatttaa	tcttaaaaa	2400
aaacccctga	caggatcaaa	accacagcag	gactacataa	taggaaaact	atacataaat	2460
aggtagaata	atctgctcag	gatcactagg	taagttgctg	aataagaatt	caagatgaaa	2520
aagatcccag	agtttaaaac	ccaacctttc	aaacagtgtt	tccttcttct	tagagtacaa	2580
tgttctgaga	aagagatcct	ctggaattct	ggcctaagtg	tatttaatgc	ccgggtaaa	2640
aaagtggag	aacattttct	tttaggggct	gctgctggat	ttctaaaaag	aaaataattt	2700
ctcagctagt	aacatggagc	caaacaacag	cttcacaaga	ctctgggttc	tttagccctc	2760
atctccttca	atccaccctc	ttataaccag	tccttcttgt	ttttccctc	ccagctttgt	2820
tcagcagcat	gcccttcacc	cagaccttgt	cttgtcactc	atccctactc	gccatcattc	2880
tttcatttct	cttggtccaa	tctctctcca	ccacttctct	cctacacgta	tgtaggctac	2940
cattccctct	tcttgattcc	ccccgcccaa	ctctctttct	ccatttcttg	cctttcagaa	3000
gaacatgtga	tcattccaggc	cgagttctat	ctgaatcctg	accaatcagg	cgagtttatg	3060
tttgactttg	atggtgatga	gattttccat	gtggatatgg	caaagaagga	gacggtctgg	3120
cggcttgaag	aatttgagcg	atttgccagc	tttgaggctc	aaggtgcatt	ggccaacata	3180
gctgtggaca	aagccaacct	ggaaatcatg	acaaagcgct	ccaactatac	tccgatcacc	3240
aatggtacct	ccctctctgc	tgcactcctg	gacacgggaa	tccatagttt	gaaagtagtt	3300
gcttcagctc	tttgtgttag	attattgtaa	ctgattttcc	ctccaagggc	ctaaccttgc	3360
cattacaag	ccccaaattc	tcatgccaga	ggtctgagaa	ctttatgggt	ttgatccctat	3420
cttggtgtgc	tcaagtcttg	tctctgtcat	ccatggtctc	ctacgaagtc	attgcccata	3480
gttcatgcta	ggggagccag	aagggaagtc	cttggtatct	ttatacctca	atattggctc	3540
aatctcttgg	ggaggggggtg	ctgtcagaga	ctgttatctg	aggatgtgac	atagacttct	3600

cagggcacaa	tttcaactac	tttttcagct	ttaggggtttt	tagatacgtt	tgtaccacaa	3660
ttgagcatgg	gagggagagg	ggtgagccta	agcagtgacg	gctgattctg	tcacgtctgt	3720
catgtgtccc	ccagtacctc	cagaggtaac	tgtgtctacg	aacagccctg	tggaactgag	3780
agagcccaac	gtcctcatct	gtttcatcga	caagttcacc	ccaccagtgg	tcaatgtcac	3840
gtggcttcga	aatggaaaac	ctgtcaccac	aggagtgtca	gagacagtct	tcctgcccag	3900
ggaagaccac	cttttccgca	agttccacta	tctccccctc	ctgccctcaa	ctgaggacgt	3960
ttacgactgc	agggtggagc	actggggcct	ggatgagcct	cttctcaagc	actgggggat	4020
ggaccaaacac	tcaatctcct	ttatttcaag	gtttcctcct	atgatgcttg	tgtgaaactc	4080
ggtgtttctaa	ctgtttcata	atatctgcta	caattaatat	aactgtcttc	tcctactatc	4140
cagcttcctc	cttttttttaa	tctgtaattc	tctcaatata	tcattctgtc	ttcctcttct	4200
ttaatctatg	aataactttt	ctctttctaa	agaaccctac	atgtgattct	gagtgttact	4260
tcttcccaca	ctcattacca	tgtactctgc	cttatctccc	cccagagttt	gatgctccaa	4320
gccctctccc	agagactaca	gagaacgtgg	tgtgtgcctt	gggcctgact	gtgggtctgg	4380
tgggcatcat	tattgggacc	atcttcacata	tcaagggatt	gcgcaaaagc	aatgcagcag	4440
aacgcagggg	gcctctgtaa	ggcacatgga	ggtgagttag	gtgtggtcag	aggaagacat	4500
atatggagat	atctgaggga	ggaaaatcag	ggtggggaaa	ggaaatgtaa	tgcatttaag	4560
agacaaggta	ggaacagatg	tggctcttga	tttctctttg	ctagaatgaa	tcagacattg	4620
gtatcatctg	gtacccccaaa	gcttcagggt	ctgtcatccc	tttctataga	cgggcacctt	4680
gatcacggct	ccagtcttag	aaatcatctc	cagtacctaa	aaccattggt	tcacattaga	4740
atactgagtc	tagggatcta	gaaaatacat	tagaatatgg	agtctaggga	tctagaaaat	4800
actgagtcta	gggatctaga	aaaataagcc	tcaagatttg	ggcacatcct	agcttgtatt	4860
tcctggggca	ggtcatcagt	tcagaagcat	ttccagatcc	tggctccttt	caggttaggg	4920
tcaatttcgtt	gcattgaaatg	ggaatctctt	agaggccaat	gcctgctttt	gcttcttttag	4980
tctcaaattgt	agtatgagaa	actctaaaaa	agggttaagac	atgggttgctt	attatgttca	5040
gttgagagat	aggaactaac	tgtatacagt	tagttcatgt	tggaaagggt	agatgaacat	5100
tgaagaatt	ttgcaaagtc	aaaggattaa	gagagaagag	gaaggaaatct	gaagcaagga	5160
gctcaaaacg	gatctttaat	tccttggtaa	ctatgtgtgt	cttgctatag	gtgatgggtg	5220
ttcttagaga	gaagatcact	gaagaaactt	ctgctttaat	gactttacaa	agctggcaat	5280
attacaatcc	ttgacctcag	tgaagcagct	catcttcagc	gttttccagc	cctatagcca	5340
ccccaaagtgt	ggttatgcct	cctcgattgc	tccgtactct	aacatctagc	tggcttccct	5400
gtctattgcc	ttttcctgta	tctatttctc	ctatttctta	tcattttatt	atcaccatgc	5460
aatgcctctg	gaataaaaaca	tacaggagtc	tgtctctgct	atggcccatg	gggcatctct	5520
tgtgtactta	ttgtttaagg	tttctcctcaa	ctgtgatatt	tctgaacaca	ataaactatt	5580
tgatgatctt	gggtggaatt	tttggtgttt	aagccagttc	tttgggtggc	ggtggggggt	5640
ggggagtcgg	tcctgggggaa	tatatgtgat	cctttcccgg	taaaatatct	gaatgttgaa	5700
tttatcttat	aaattctaga	attc				5724

<210> 66

<211> 1100

<212> DNA

<213> Homo sapiens

<220>

<223> MHC HLA class II DM alpha chain-like (HLA-DMA);
RING6

<400> 66

ctaaagctgg	gttggtagct	cctacctact	gtgtggcaag	aaggatatgg	tcatgaacag	60
aaccaaggag	ctgcgctgct	acagatgtta	ccacttctgt	ggctgctacc	ccactcctgg	120
gccgtccctg	aagtccttac	tccaatgtgg	ccagatgacc	tgcaaaaacca	cacattcctg	180
cacacagtgt	actgccagga	tgggagtcct	agtgtgggac	tctctgaggc	ctacgcagag	240
gaccagcttt	tcttcttcga	cttttcccag	aacactcggg	tgcctcgcct	gcccgaattt	300
gctgactggg	ctcaggaaca	gggagatgct	cctgccattt	tatttgacaa	agagttctgc	360
gagtggatga	tccagcaaat	agggccaaaa	cttgatggga	aaatcccggg	gtccagaggg	420
tttcttatcg	ctgaagtgtt	cacgctgaag	cccctggagt	ttggcaagcc	caacactttg	480
gtctgttttg	tcagtaatct	cttccccacc	atgctgacag	tgaactggca	cgatcattcc	540
gtccctgtgg	aaggatttgg	gcctactttt	gtctcagctg	tcgatggact	cagcttccag	600
gccttttctt	acttaaaact	cacaccagaa	ccttctgaca	ttttctcctg	cattgtgact	660
cacgaaattg	accgctacac	agcaattggc	tattgggtac	cccggaaacg	actgccctca	720
gatctgctgg	agaatgtgct	gtgtggcgctg	gcctttggcc	tgggtgtgct	gggcatcatc	780
gtgggcattg	ttctcatcat	ctacttccgg	aagccttgct	cagggtgactg	attcttccag	840

accagagttt	gatgccagca	gcttcggcca	tccaaacaga	ggatgctcag	attttctaca	900
tcctgcccag	gatctcctct	tagggtagaa	gaagtctctg	ggacatccct	gggggtgtgtg	960
tgtagatttc	ccacctgggg	actctgctgt	ccctgggctt	gcatcccagg	gatcccagag	1020
tggcctgcct	atcacaacca	catcccttcc	ccccacaagg	caataaatct	catttcttta	1080
aaaaaaaaaa	aaaaaaaaaa					1100

<210> 67
 <211> 1763
 <212> DNA
 <213> Homo sapiens

<220>
 <223> MHC HLA class II DR2-Dw12 DQw1-beta chain
 (HLA-DRB2, HLA-Dw12)

<400> 67		
gcactggact	gagaaccttc accaaaaaaa tgtctgcca gagacagatg aggtccttca 60	
gctccagtgc	tgattggttc ttttccaaag gccatctaa tcctaccacg cacggaaata 120	
tccacaggtt	tttattcttt ctgccagcta catcagatcc atcagggtccg agctgagttg 180	
actaccacta	cttttccctt tgtctcaatt atgtcttggga agaaggcttt gcggatcccc 240	
ggaggccttc	gggcaccaac tgtgaccttg atgctggcga tgctgagcac cccagtggct 300	
gagggcagag	accctcccga ggatttcgtg ctccagttta aggccatgtg ctacttcacc 360	
aatgggacgg	agcgcgtgcg ttatgtgacc agatacatct ataaccgaga ggaggacgtg 420	
cgcttcgaca	gcgacgtggg ggtgtatcgg gcggtgacgg cgcaggggcg gcctgacgcc 480	
gagtactgga	acagccagaa ggacatcctg gagaggaccc gagcggagtt ggacacggtg 540	
tgcagacaca	actacgaggt ggcgttcgcg gggatcttgc agaggagagt ggagcccaca 600	
gtgaccatct	ccccatccag gacagaggcc ctcaaccacc acaacctgct ggtctgctcg 660	
gtgacagatt	tctatccagg ccagatcaaa gtccggtggg ttccggaatga ccaggaggag 720	
acagctggcg	ttgtgtccac ccccttatt aggaacggtg actggacctt ccagatcctg 780	
gtgatctgg	aaatgactcc ccagcatgga gacgtctaca cctgccacgt ggagcacccc 840	
agcctccaga	gccccatcac cgtggagtgg cgggctcagt ctgaatctgc ccagaacaag 900	
atgctgagtg	gcattggagg ctctcgtgctg gggctgatct tctcgggct gggccttacc 960	
atccgtcaaa	ggagtcagaa aggacctcaa gggcctccac cagcagggct tctgcactga 1020	
ctcctgagac	tatttttaact aggattggtt atcactcttc tgtgatgcct gcttgtgcct 1080	
gccagaatt	cccagctgcc tgtgtcagct tgtccccga gatcaaagtc ctacagtggc 1140	
tgtcacgcag	ccaccaggtc atctcctttc atccccacc caaggcgtg gctgtgactc 1200	
tgcttctgc	actgacctag agcctctgcc tgtgcacggc cagctgcgtc tactcaggtc 1260	
ccaaggggtt	tctgtttcta ttctctctc agactgctca agagaagcac atgaaaaaca 1320	
ttacctgact	ttagagcttt ttacataat taaacatgat cctgagttaa aaaaaaaaaa 1380	
ggaaatcgct	gcagaatgaa ggaatatccc ttgaggtgac ccagccaacc tgtggccaga 1440	
aggagggttg	taccttgaaa agaccactga aagcattttg ggggtgtcaag taagggtggg 1500	
cagaggaggt	agaaaatcaa ttcaattgtc gcatcattca tgggtcttta atattgatgc 1560	
tcagtgcatt	ggccttagaa tatcccagcc tctcttctgg tttggtgagt gctgtgtaag 1620	
taagcatggt	agaattgttt ggagacatat atagtgatcc ttgggtcactg gtgtttcaaa 1680	
cattctggaa	agtcacatcg atcaagaata ttttttattt ttaagaaagc ataaccagca 1740	
ataaaaatac	tattttttgag tct	1763

<210> 68
 <211> 1216
 <212> DNA
 <213> Homo sapiens

<220>
 <223> MHC HLA class II DQw1.1 beta chain (HLA-DQB1)
 precursor

<400> 68	
ttttattctt	tctgccaggt acatcagatc catcaggtct gagctgtggt gactaccact 60
acttttccct	tcgtctcaat tatgtcttgg aagaagtctt tgcggatccc cggagacctt 120
cgggtagcaa	ctgtcacctt gatgctggcg atcctgagct cctcactggc tgagggcaga 180
gactctcccc	aggatttcgt gtaccagttt aagggcctgt gctacttcac caacgggacg 240

```

gagcgcgtgc ggggtgtgac cagacacatc tataaccgag aggagtacgt gcgcttcgac 300
agcgacgtgg ggggtgtaccg ggcagtgaac cgcagagggc ggcctgttgc cgagtactgg 360
aacagccaga aggaagtccct ggagggggcc cgggcgtcgg tggacagggt gtgcagacac 420
aactacgagg tggcgtaccg cgggatcctg cagaggagag tggagccac agtgaccatc 480
tccccatcca ggacagaggc cctcaaccac cacaacctgc tgatctgctc ggtgacagat 540
ttctatccaa gccagatcaa agtccggtgg ttctcggaatg atcaggagga gacagccggc 600
gttgtgtcca cccccctcat taggaacggt gactggacct tccagatcct ggtgatgctg 660
gaaatgactc cccagcgtgg agatgtctac acctgccacg tggagcacc cagcctccag 720
agccccatca ccgtggagtg gcgggctcag tctgaatctg cccagagcaa gatgctgagt 780
ggcgttggag gcttcgtgct ggggctgac ttcttgggc ttggccttat catccgtcaa 840
aggagtccga aagggtctct gcactgactc ctgagactgt tttaactaag actgggtatc 900
actcttctgt gatgcctgct tgtccctgcc cagaattccc agctgcctgt gtcagcttgt 960
ccccctgaga tcaaatgcct acagtggctg tcacgcaacc accaggtcat ctcctttcat 1020
ccccaccca aggcgctggc tgtgactctg ctctctgcac tgaccagag ccactgcctg 1080
tacatggcca gctgcgtcta ctcaggcccc aaggggattc tgtttctgtt ctctcctcag 1140
actgctcaag agaagcacat gaaaaacatt acctgacttc agagcttttt tacataatta 1200
aacatgatcc tgagtt                                     1216

```

<210> 69

<211> 915

<212> DNA

<213> Homo sapiens

<220>

<223> rearranged immunoglobulin lambda light chain (Ig lambda)

<400> 69

```

ctgatttgca tggatggact ctccccctct cagagtatga agagagggag agatctgggg 60
gaagctcagc ttcagctgtg ggtagagaag acaggactca ggacaatctc cagcatggcc 120
agcttccctc tctcctcac cctcctcact cactgtgcag ggtcctgggc ccagtctgtg 180
ctgactcagc caccctcagc gtctgggacc cccgggcaga gggtcacat ctctgttct 240
ggaagccgct ccaacgtcgg aagtaataat gttaactggt accagcagct cccaggaacg 300
gccccaaac tctcatcta tagtaataat cagcgccct caggggtccc tgaccgattc 360
tctggctcca agtctggcac ctgagcctcc ctggccatca gtgggctcca gtctgaggat 420
gaggctgatt attactgtgc aacatgggat gacagtactg tggctctcgg cggagggacc 480
aagctgaccg tccctggtea gcccaaggct gccccctcgg tcaactctgtt cccgccctcc 540
tctgaggagc ttcaagccaa caaggccaca ctggtgtgtc tcataagtga cttctacccg 600
ggagccgtga cagtggcctg gaaggcagat agcagccccg tcaaggcggg agtgagagacc 660
accacaccct ccaaacaaag caacaacaag tacgcggcca gcagctatct gagcctgacg 720
cctgagcagt ggaagtccca cagaagctac agctgccagg tcacgcatga agggagcacc 780
gtggagaaga cagtggcccc tacagaatgt tcataggttc tcaaccctca cccccacca 840
cgggagacta gagctgcagg atcccagggg aggggtctct cctcccaccc caaggcatca 900
agcccttctc cctgc                                     915

```

<210> 70

<211> 527

<212> DNA

<213> Homo sapiens

<220>

<223> immunoglobulin heavy chain (IgH), VDJRC region

<400> 70

```

ttggggctgt gctgggtttt cctcgttgct cttttaagag gtgtccagtg tcagggtgcag 60
ctgggtggagt ctgggggagg cgtgggtccag cctgggaggt ccctgagact ctctgtgca 120
gtctctggac tcacctttag tagctatggt atgcaactggg tccgccaggc tccaggcaag 180
gggctgcagt ggggtggcagc tatatcata gatggaagta ataaatacta cgcagactcc 240
ttgaagggcc gattcacat ctccagagac aattccaaga acacgtgta tctgcaaattg 300
aacagcctga gatctgagga cacggctgtg tattactgtg cgagaggggc ggggattact 360
gatttttggg gtggttatta cgtcaactgg ttcgaccctt ggggccaggg aacctgtgtc 420

```

accgtctcct cagcttccac caagggccca tcggtcttcc ccctggcgcc ctgctccagg 480
 agcacctctg ggggcacagc ggccctgggc tgcctggtca aggacta 527

<210> 71
 <211> 382
 <212> DNA
 <213> Homo sapiens

<220>
 <223> immunoglobulin lambda-like protein (IGLL2)

<400> 71
 ggtcagccca agactacccc gtcggtcatt ctgttctctgc cgtcctgtga ggagccccaa 60
 gccaacaagg ccacactggt gtgtctcatg aataacttta tccgggaatc ttgatggtga 120
 cctggaaggc agatgggtacc ctcacacccc agagcgtgga gaagaccacg ccctccaaac 180
 agagcaacaa caagtacgtg gccagcagct acctgagcct gacgcccag cagtggaggt 240
 cccgcagaag ctacagctgc caggttatgc aagaaggagg caccgtggag aagtcagtgg 300
 cccctgcaga atgttcatag gttccagccc ccaccccacc acaggggcct ggagctgcag 360
 gatcccaggg gaggggtctc tc 382

<210> 72
 <211> 1244
 <212> DNA
 <213> Homo sapiens

<220>
 <223> immunoglobulin rearranged gamma chain, V-J-C
 region

<400> 72
 atggaagccc cagctcagct tctcttcctc ctgtactctt ggctcccaga taccaccgga 60
 gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 120
 ctctcctgca gggccagtcg gagggttggt agctacttag cctggtacca acagaaacct 180
 ggccaggctc ccaggccctt catctatgat gcatccaaca gggccactgg catcccagcc 240
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 300
 gaagattttg cagtttatta ctgtcaacac cgtgacaatt ggccctccggg ggccactttc 360
 ggcggaggga ccaagggtga gatcaaacat accaccggag aaattgtgtt gacacagtct 420
 ccagccaccc tgtctttgtc tccaggggaa agagccaccc tctcctgcag ggccagtcag 480
 agtgttgga gctacttagc ctggtaccaa cagaaacctg gccaggctcc caggcccctc 540
 atctatgat catccaacag ggccactggc atcccagcca ggttcagtg cagtgggtct 600
 gggacagact tcactctcac catcagcagc cttagagcctg aagattttgc agtttattac 660
 tgtcaacacc gtgacaattg gcctccgggg gccactttcg gcggaggag caaggtggag 720
 atcaaacgaa ctgtggctgc accatctgtc ttcactcttc cgccatctga tgagcagttg 780
 aaatctggaa ctgcctctgt tgtgtgcctg ctgaataact tctatcccag agaggccaaa 840
 gtacagtga aggtggataa cgccctccaa tcgggtaact cccaggagag tgtcacagag 900
 caggacagca aggacagcac ctacagcctc agcagcacc tgacgctgag caaagcagac 960
 tacgagaaac acaaagtcta cgcctgcgaa gtcacccatc agggcctgag ctgcgccgtc 1020
 acaaagagct tcaacagggg agagtgttag agggagaagt gccccacct gctcctcagt 1080
 tccagcctga cccctccca tcctttggcc tctgaccctt tttccacagg ggacctaccc 1140
 ctattgcggt cctccagctc atctttcacc tcacccccc cctcctcctt ggctttaatt 1200
 atgctaattgt tggaggagaa tgaataaata aagtgaatct ttgc 1244

<210> 73
 <211> 454
 <212> DNA
 <213> Homo sapiens

<220>
 <223> immunoglobulin rearranged kappa light chain,
 variable region

```

<400> 73
ctcagctcct ggggctcctg ctgctctggc tctcaggtgc cacatgtgac atccagatga 60
cccagttctc atcctccctg tctgcatctg taggagacag agtcaccatc acttgccagg 120
cgactcagga cattggcaac tatttaaatt ggtatcagca caaaccaggg aaagccccta 180
acctcctgat ctacgatgca tccaatttgg aaacaggggt cccatcaagg ttcagtggac 240
gtggatctgg gacacatttt actttcacca tcagcagcct gcagcctgaa gatattgcaa 300
catattactg tcaacagtat ggtaatctcc cattcacttt cggccctggg accaaagtgc 360
atatcaaacg aactgtggct gcaccatctg tcttcatctt ccgccatctg atgagcagtt 420
gaaatctgga ctgcctctgt tgtgtgcctg ctga
454

```

```

<210> 74
<211> 676
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> MHC HLA class II Ia-associated invariant gamma
chain; CD74 antigen

```

```

<400> 74
accccaacct caaccgcgcg cttctctctc cagtccccat gtgagagcag cagaggcggt 60
cttcaacatc ctgccagccc cacacagcta cagctttctt gctcccttca gccccagcc 120
cctcccccat ctcccacct gtacctcatc ccatgagacc ctggtgcctg gctctttcgt 180
cacccttgga caagacaaac caagtcggaa cagcagataa caatgcagca aggcctgct 240
gcccaatctc catctgtcaa caggggctgt aggtcccagg aagtggccaa aagctagaca 300
gatccccgtt cctgacatca cagcagcctc caacacaagg ctccaagacc taggctcatg 360
gacgagatgg gaaggcacag ggagaaggga taaccctaca ccagacccc aggtctggaca 420
tgctgactgt cctctccccct ccagcctttg gccttggtt ttctagccta ttacctgca 480
ggctgagcca ctctcttccc ttccccagc atcactcccc aaggaagagc caatgttttc 540
caccataat cttttctgcc gaccctagt tcctctgct cagccaagct tggtatcagc 600
tttcagggcc atgggtcaca ttagaataaa aggtagtaat tagaacactc tggttcctgc 660
cctttctgtt gagaga
676

```

```

<210> 75
<211> 468
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> omega light chain protein 14.1, immunoglobulin
lambda chain-like

```

```

<400> 75
tcctctgtcc acacaggtca gcccaaggcc acccctcgg tcaactctgtt cctgccgtcc 60
tctgaggagc tccaagccaa caaggccaca ctggtgtgtc tcatgaatga cttctatctg 120
ggaatcttga cggtgacctg gaaggcagat ggtaccccca tcaccaggg cgtggagatg 180
accacgccct ccaaacagag caacagcaag tacatggcca gcagctacct gagcctgacg 240
cccagcagt ggaggtcccg cagaagctac agctgccagg tcatgcacga agggagcact 300
gcagagaaga cggtggtccc tgcagaatgt tcataggttc ccagcccca gccacccac 360
aggaggcctg gagctgcagg atcccagggg aggggtctct ctcccatcc caagtcaccc 420
agcccttctc cctgcactca tgaaaccca ataatatcc tcattgac
468

```

```

<210> 76
<211> 2919
<212> DNA
<213> Homo sapiens

```

<220>

<223> polymeric immunoglobulin receptor (poly-Ig
receptor, PIGR) precursor; hepatocellular
carcinoma-associated protein TB6; transmembrane
secretory component (SC)

<400> 76

```
agagtttccag ttttggcagc agcgtccagt gccctgccag tagctcctag agaggcaggg 60
gttaccact ggccagcagg ctgtgtccct gaagtcagat caacgggaga gaaggaagtg 120
gctaaaacat tgcacaggag aagtcggcct gagtgggtgcg gcgctcggga cccaccagca 180
atgctgctct tcgtgctcac ctgcctgctg gcggtcttcc cagccatctc cacgaagagt 240
cccatatttg gtcccagagga ggtgaatagt gtggaaggta actcagtgtc catcacgtgc 300
tactaccac ccacctctgt caaccggcac acccggaagt actggtgccg gcagggagct 360
agaggtggct gcataaccct catctcctcg ggcacatttg tctccagcaa atatgcaggc 420
agggctaacc tcaccaactt cccggagaac ggcacatttg tggatgaacat tgcccagctg 480
agccaggatg actccgggag ctacaagtgt ggctgggca tcaatagccg aggcctgtcc 540
tttgatgtca gctggagggt cagccagggt cctgggctcc taaatgacac taaagtctac 600
acagtggacc tgggcagAAC ggtgaccatc aactgccctt tcaagactga gaatgtctaa 660
aagaggaagt ccttgtagaa gcagataggc ctgtaccctg tgcctggcat cgactccagt 720
ggttatgtga atcccaacta tacaggaaga atacgccttg atattcaggg tactggccag 780
ttactgttca gcgttgtcat caaccaactc aggtcagcg atgctgggca gtatctctgc 840
caggctgggg atgattccaa tagtaataag aagaatgctg acctccaagt gctaaagccc 900
gagcccgagc tggtttatga agacctgagg ggctcagtga ccttccactg tgccctgggc 960
cctgaggtgg caaacgtggc caaatttctg tgccgacaga gcagtgggga aaactgtgac 1020
gtggtcgtca acacctggg gaagagggcc ccagccttg agggcaggat cctgctcaac 1080
cccaggaca aggatggctc attcagtgtg gtgatcacag gcctgaggaa ggaggatgca 1140
ggcgctacc tgtgtggagc ccattcggat ggtcagctgc aggaaggctc gcctatccag 1200
gcctggcaac tcttcgtcaa tgaggagtcc acgattcccc gcagccccac tgtggtgaag 1260
gggtggcag gaagctctgt ggccgtgctc tgcccctaca accgtaagga aagcaaaagc 1320
atcaagtact ggtgtctctg ggaaggggccc cagaatggcc gctgccccct gctggtggac 1380
agcgaggggt gggttaaggc ccagtacgag ggccgctct cctgctgga ggagccaggc 1440
aacggcacct tcactgtcat cctcaaccag ctcaccagcc gggacgcccg cttctactgg 1500
tgtctgacca acggcgatac tctctggagg accaccgtgg agatcaagat tatcgaagga 1560
gaaccaaacc tcaaggtacc agggaatgtc acggctgtgc tgggagagac tctcaaggtc 1620
ccctgtcact ttccatgcaa attctcctcg tacgagaaat actggtgcaa gtggaataac 1680
acgggctgcc aggcctgcc cagccaagac gaaggcccca gcaaggcctt cgtgaactgt 1740
gacgagaaca gccggttgt ctccctgacc ctgaacctgg tgaccagggc tgatgagggc 1800
tggtactggt gtggagtga gacggggccac ttctatggag agactgcagc cgtctatgtg 1860
gcagttgaag agaggaaggc agcgggggtcc cgcgatgtca gcctagcgaa ggcagacgct 1920
gctcctgatg agaaggtgct agactctggt ttccgggaga ttgagaacaa agccattcag 1980
gatccaggc tttttgcaga ggaaaaggcg gtggcagata caagagatca agccgatggg 2040
agcagagcat ctgtggatcc cggcagctct gaggacaag gtggaagctc cagagcgtg 2100
gtctccaccc tgggtcccct gggcctggtg ctggcagtgg gagcctggtg tgtgggggtg 2160
gccagagccc ggcacaggaa gaacgtcgac cgagtttcaa tcagaagcta caggacagac 2220
attagcatgt cagacttcga gaactccagg gaatttgtag ccaatgacaa catgggagcc 2280
tcttcgatca ctcaggagac atccctcgga ggaaaagaag agtttggtgc caccactgag 2340
agcaccacag agaccaaaga acccaagaag gcaaaaaggt catccaagga ggaagccgag 2400
atggcctaca aagacttct gctccagtc agcaccgtgg ccgcccaggc ccaggacggc 2460
cccagggaag cctagacggt gtcgcccgt gctccctgca ccatgacaa tcaccttcag 2520
aatcatgtcg atcctgggg cctcagctc ctggggaccc cactccctgc tctaacacct 2580
gcctagggtt ttctactgt cctcagaggc gtgctggtcc cctcctcagt gacatcaaa 2640
cctggcctaa ttgttctat tggggatgag ggtggcatga ggaggtccca cttgcaactt 2700
ctttctgttg agagaacctc aggtacggag aagaatagag gtctctatgg gtcccttgaa 2760
ggaagagggg ccagggtggg agagctgatt gcagaaagga gagacgtgca gcgcccctct 2820
gcacccttat catgggatgt caacagaatt tttccctcc actccatccc tccctcccgt 2880
ccttcccctc ttcttcttct cttaccatca aaagatgta 2919
```

<210> 77

<211> 1799

<212> DNA

<213> Homo sapiens

<220>

<223> immunoglobulin alpha heavy chain allotype 2
constant region; IgA2 H chain C region (IGHA2)

<400> 77

```
cctctctgtg ctgggttcct ccagtgtaga ggagaggcag gtacagcctg tcctcctggg 60
gacatggcat gagggccgag tcctcacagc gcattctgtg ttccagcatc cccgaccagc 120
cccaaggtct tcccgctgag cctcgacagc accccccaag atgggaacgt ggtcgtcgca 180
tgcttggtcc agggcttctt cccccaggag ccactcagtg tgacctggag cgaaagcgga 240
cagaacgtga ccgccagaaa cttccacact agccaggatg cctccgggga cctgtacacc 300
acgagcagcc agctgaccct gccggccaca cagtgccagc acggcaagtc cgtgacatgc 360
cacgtgaagc actacacgaa ttccagccag gatgtgactg tgccctgccg aggtcagagg 420
gcaggctggg gagtggggcg gggccacccc gtcttgcctt gacactgcgc ctgaccccg 480
gttccccaca gggagccgac ctttactca caccagagtg gaccgcgggc cgagccccag 540
gaggtggtgg tggacaggcc aggaggggag aggcggggg acggggaagg gcgttctgac 600
cagctcaggc catctctcca ctccagttcc cccacctccc ccatgctgcc acccccgact 660
gtcgtctcac cgaccggccc tcgaggacct gctcttaggt tcagaagcga acctcacgtg 720
cacactgacc ggcctgagag atgcctctgg tgccaccttc acctggacgc cctcaagtgg 780
gaagagcgct gttcaaggac cacctgagcg tgacctctgt ggctgctaca gcgtgtccag 840
tgtctgcct ggctgtgccc agccatggaa ccatggggag accttcacct gcaactgctg 900
ccaccccgag ttgaagaccc cactaaccgc caacatcaca aaatccggtg ggtccagacc 960
ctgctcgggg ccctgctcag tgctctggtt tgcaaagcat attcccggcc tgcctcctcc 1020
ctcccaatcc tgggctccag tgctcatgcc aagtacagag ggaaactgag gcaggctgag 1080
gggccaggac acagcccagg gtgccacca gagcagagg gctctctcat cccctgcccc 1140
gccccctgac ctggctctct accctccagg aaacacattc cggcccgagg tccacctgct 1200
gccgcccggc tcggaggagc tggccctgaa cgagctgggt acgctgacgt gcctggcacg 1260
tggcttcagc cccaaggatg tgctggttcg ctggctgcag gggtcacagg agctgccccg 1320
cgagaagtac ctgacttggt catcccggca ggagcccagc cagggcacca ccaccttcgc 1380
tgtgaccagc atactgcgcg tggcagccga ggactggaag aagggggaca ctttctcctg 1440
catggtgggc cagcaggccc tgccgctggc cttcacacag aagaccatcg accgcttggc 1500
gggtaaaccc acccatgtca atgtgtctgt tgtcatggcg gaggtggacg gcacctgcta 1560
ctgagccgac ccctgtccc caccctgaa taaactccat gctcccccaa gcagccccac 1620
gcttccatcc gggcctgtgc tgtccatcct cagggtctca gcacttggga aaggccagg 1680
gcatggacag ggaagaatac cccctgcctt gagcctcggg gggccctgg caccctcatg 1740
agactttcca ccctggtgtg agtgtgagtt gtgagtgtga gagtgtgtgg tgcaggagg 1799
```

<210> 78

<211> 1151

<212> DNA

<213> Homo sapiens

<220>

<223> T-cell specific protein; T-cell receptor
beta-chain

<400> 78

```
ctggtctaga atattccaca tctgctctca ctctgccatg gactcctgga ccttctgctg 60
tgtgtccctt tgcctcctgg tagcgaagca tacagatgct ggagttatcc agtcaccccc 120
ccatgagggt acagagatgg gacaagaagt gactctgaga tgtaaaccaa tttcaggcca 180
caactccctt ttctggtaca gacagacct gatgcgggga ctggagttgc tcatttactt 240
taacaacaac gttccgatat atgattcagg gatgcccag gatcgattct cagctaagat 300
gcctaatagc tcattctcca ctctgaagat ccagccctca gaaccaggg actcagctgt 360
gtacttctgt gccagcagtt tctcgacctg ttccggctaac tatggctaca ccttcggttc 420
ggggaccagg ttaaccgttg tagaggacct gaacaagggt tcccaccccg aggtcgtgt 480
gtttgagcca tcagaagcag agatctccca caccaaaag gccacactgg tgtgcttggc 540
cacaggcttc ttccccgacc acgtggagct gagctgggtg gtgaatggga aggaggtgca 600
cagtggggtc agcacagacc cgcagcccct caaggagcag cccgccctca atgactccag 660
atactgcctg agcagccgac tgagggtctc ggccaccttc tggcagaacc cccgcaacca 720
cttcgcgtgt caagtccagt tctacggggt ctcggagaat gacgagtgga cccaggatag 780
ggccaaaacc gtcacccaga tcgtcagcgc cgaggcctgg ggtagagcag actgtggctt 840
tacctcgggt tcctaccagc aaggggtcct gtctgccacc atcctctatg agatcctgct 900
```

```

aggggaaggcc accctgtatg ctgtgctggt cagcgccctt gtgttgatgg ccatgggtcaa 960
gagaaaggat ttctgaaggc agccctggaa gtggagttag gagcttctaa cccgtcatgg 1020
ttcaatacac attcttcttt tgccagcgct tctgaagagc tgctctcacc tctctgcac 1080
ccaatagata tccccctatg tgcatgcaca cctgcacact cacggctgaa atctccctaa 1140
cccaggggga c

```

1151

<210> 79
 <211> 1032
 <212> DNA
 <213> Homo sapiens

<220>
 <223> gamma-interferon-inducible protein precursor
 (IP30); contains gamma-interferon inducible
 lysosomal thiol reductase (GILT)

```

<400> 79
ggaggggtggg cagcactcgc tttattgtcc agcattccac atggatagtc gccacacctt 60
tgcccctgct gcgatgaccc tgtcgccact tctgctgttc ctgccaccgc tgctgctgct 120
gctggacgto cccacggcgg cgggtgcaggc gtcccctctg caagcgttag acttcttttg 180
gaatggggcca ccagtttaact acaagacagg caatctatac ctgcggggggc ccctgaagaa 240
gtccaatgca ccgcttgtca atgtgacct ctactatgaa gcactgtgcg gtggctgccg 300
agccttcctg atccgggagc tcttcccaac atggctgttg gtcattggaga tcctcaatgt 360
cacgtcggtg ccctacggaa acgcacagga acaaaatgtc agtggcagggt gggagttcaa 420
gtgccagctt ggagaagagg agtgcaaatt caacaagggt gaggcctgcg tgttgatga 480
acttgacatg gagctagcct tcctgacct gtctggcatg gcatggaaga gtttgaggac 540
atggagagaa gtctgccact atgcctgcag ctctacgcc cagggtctgc gccagaacta 600
tcatggagtg tgcaatgggg gaccgcggca tgcagctcat gcacgccaac gccagcggga 660
cagatgctct ccagccaccg cacgagtatg tgccctgggt caccgtcaat gggaaaccct 720
tggaagatca gaccagctc cttacccttg tctgccagtt gtaccagggc aagaagccgg 780
atgtctgccc ttctcaacc agctccctcc ggagtgtttg cttcgagtgt tggccgggtg 840
gtcgcggaga gctcatggaa ggcgagtggg aactcggctg cctgcctttt tttctgatcc 900
agaccctcgg cacctgtac ttaccaactg gaaaatttta tgcatcccat gaagcccaga 960
tacacaaaat tccacccta gatcaagaat cctgctccac taagaatggt gctaaagtaa 1020
aactagttta at

```

1032

<210> 80
 <211> 2709
 <212> DNA
 <213> Homo sapiens

<220>
 <223> interferon-gamma induced protein 16 (IFI16);
 interferon-inducible myeloid differentiation
 transcriptional activator

```

<400> 80
gggaatagca gaataggagc aagccagcac tagtcagcta actaagtgc tcaaccaagg 60
ccttttttcc ttgttatctt tgcagatact tcattttctt agcgtttctg gagattacaa 120
catcctgctg ttccgtttct gggaacttta ctgatttctc tccccctca cacaataaag 180
cattgattcc tgcatttctg aagatctcaa gatctggact actgttgaaa aaatttccag 240
tgaggctcac ttatgtctgt aaagatggga aaaaaatata agaacattgt tctactaaaa 300
ggattagagg tcatcaatga ttatcatttt agaatggtta agtccttact gagcaacgat 360
ttaaacttta atttaaaaat gagagaagag tatgacaaaa ttcagattgc tgacttgatg 420
gaagaaaagt tccgagggtg tgctgggttg ggcaactaa taaaaatttt cgaagatata 480
ccaacgcttg aagacctggc tgaaactctt aaaaaagaaa agttaaaagt aaaaggacca 540
gccctatcaa gaaagaggaa gaaggaagtg catgctactt cacctgcacc ctccacaagc 600
agcactgtca aaactgaagg agcagaggga actcctggag ctcaaaaaag aaaaaaatca 660
accaagaaa aggctggacc caaagggagt aaggtgtccg aggaacagac tcagcctccc 720
tctcctgcag gaccggcat gtccacagcc atgggcccgt ccccatctcc caagacctca 780
ttgtcagctc caccacaag ttcttcaact gagaaccgga aaacagtggc caaatgtcag 840

```

gtaactccca	gaagaaatgt	tctccaaaaa	cgcccagtg	tagtgaaggt	actgagtaca	900
acaaagccat	ttgaatatga	gaccccagaa	atggagaaaa	aaataatggt	tcatgctaca	960
gtggctacac	agacacagtt	cttccatgtg	aagggtttta	acaccagctt	gaaggagaaa	1020
ttcaatggaa	agaaaatcat	catcatatca	gattatgttg	aatatgatag	tctcctagag	1080
gtcaatgaag	aatctactgt	atctgaagct	ggtcctaacc	aaacgtttga	ggttccaaat	1140
aaaatcatca	acagagcaaa	ggaaactctg	aagattgata	ttcttcacaa	acaagcttca	1200
ggaaatattg	tatatggggt	atztatgcta	cataagaaaa	cagtaaataca	gaagaccaca	1260
atctacgaaa	ttcaggatga	tagaggaaaa	atggatgtag	tggggacagg	acaatgtcac	1320
aatatcccct	gtgaagaagg	agataagctc	cagcttttct	gctttcgact	tagaaaaaag	1380
aaccagatgt	caaaactgat	ttcagaaatg	catagtttta	tccagataaa	gaaaaaaaaca	1440
aacccgagaa	acaatgaccc	caagagcatg	aagctacccc	aggaacagcg	tcagcttcca	1500
tatccttcag	aggccagcac	aaccttccct	gagagccatc	ttcggactcc	tcagatgcca	1560
ccaacaactc	catccagcag	tttcttcacc	aagaaaaagt	aagacacaat	ctccaaaatg	1620
aatgacttca	tgaggatgca	gatactgaag	gaaggagagc	attttccagg	accgttcatg	1680
accagcatag	gccagctga	gagccatccc	cacactcctc	agatgcctcc	atcaacacca	1740
agcagcagtt	tcttaaccac	gttgaaacca	agactgaaga	ctgaacctga	agaagtttcc	1800
atagaagaca	gtgccagag	tgacctcaaa	gaagtgatgg	tgctgaacgc	aacagaatca	1860
tttgtatatg	agcccaaaga	gcagaagaaa	atgtttcatg	ccacagtggc	aactgagaat	1920
gaagtcttcc	gagtgaaggt	ttttaatat	gacctaaagg	agaagttcac	cccaaagaag	1980
atcattgcc	tagcaaatta	tgtttgccgc	aatgggttcc	tggaggtata	tcctttcaca	2040
cttgtggctg	atgtgaatgc	tgaccgaaac	atggagatcc	caaaaggatt	gattagaagt	2100
gccagcgtaa	ctcctaaaa	caatcagctt	tgctcacaaa	ctaaagggaag	ttttgtgaat	2160
ggggtgtttg	aggtacataa	gaaaaatgta	aggggtgaat	tcacttatta	tgaaatacaa	2220
gataatacag	ggaagatgga	agtgggtgtg	catggacgac	tgaacacaat	caactgtgag	2280
gaaggagata	aactgaaact	caccagcttt	gaattggcac	cgaaaagtgg	gaataccggg	2340
gagttgagat	ctgtaattca	tagtcacatc	aaggatcatca	agaccaggaa	aaacaagaaa	2400
gacatactca	atcctgattc	aagtatggaa	acttcaccag	actttttctt	ctaaaatctg	2460
gatgtcattg	acgataatgt	ttatggagat	aagggtctaag	tccttaaaaa	aatgtacata	2520
tacctgggtg	aaatacaaca	ctatacatat	acaccaccat	atatactagc	tgtaaatcct	2580
atggaatggg	ggtattggga	gtgctttttt	aatttttcat	agtttttttt	taataaaatg	2640
gcataatttg	catctacaac	ttctataata	agaaaaaata	aataaacatt	atcttttttg	2700
tgaaaaaaa						2709

<210> 81
 <211> 483
 <212> DNA
 <213> Homo sapiens

<220>
 <223> hepatitis C-associated microtubular aggregate
 protein p44

cctctgggtg	cctttcctga	gataatccac	taagaatatt	ttgtgtttct	tttctcaggg	60
aatctaaggg	aggaaattat	caactgtgca	caaggaaaaa	aatagatatg	tgaaagggttc	120
acgtaaat	cctcacatca	cagaagatta	aaattcagaa	aggagaaaaa	acagacccaa	180
gagaagtatc	taagacccaa	gggatgtgtt	ttattaatgt	ctaggatgaa	gaaatgcata	240
gaacattgta	gtacttgtaa	ataactagaa	ataacatgat	ttagtcataa	ttgtgaaaaa	300
taataataat	ttttcttgga	tttatgttct	gtatctgtga	aaaaataaat	ttcttataaa	360
actcgggtct	aacttgagag	tgtgtgtgat	tttggaaaaa	ttatgatttg	tcagcatctt	420
ctgatattca	ctgctttcat	cttaattttg	ccttctgatt	ttattttctaa	agtatgtgat	480
ttt						483

<210> 82
 <211> 634
 <212> DNA
 <213> Homo sapiens

<220>

<223> interferon-stimulated protein 15 kDa (ISG15); ISG15
ubiquitin-like modifier; ubiquitin cross-reactive protein
(UCRP) precursor; interferon alpha-inducible protein
(IFI-15K); interferon-induced 17 kDa protein precursor

<400> 82

```
cggctgagag gcagcgaact catctttgcc agtacaggag cttgtgccgt ggcccacagc 60
ccacagccca cagccatggg ctgggacctg acggtgaaga tgctggcggg caacgaattc 120
caggtgtccc tgagcagctc catgtcgggtg tcagagctga aggcgcagat caccagaag 180
attggcgtgc acgccttcca gcagcgtctg gctgtccacc cgagcgtgtg ggcgctgcag 240
gacagggctc cccttgccag ccagggcctg ggccctggca gcacggctct gctggtggtg 300
gacaaatgcg acgaacctct gagcatcctg gtgaggaata acaagggccg cagcagcacc 360
tacgaggtcc ggctgacgca gaccgtggcc cacctgaagc agcaagtga cgggctggag 420
ggtgtgcagg acgacctgtt ctggctgacc ttcgagggga agcccctgga ggaccagctc 480
ccgctggggg agtacggcct caagcccctg agcaccgtgt tcatgaatct gcgcctgcgg 540
ggaggcggca cagagcctgg cgggcggagc taagggcctc caccagcatc cgagcaggat 600
caagggccgg aaataaaggc tgttgtaaga gaat 634
```

<210> 83

<211> 1451

<212> DNA

<213> Homo sapiens

<220>

<223> interleukin 2 receptor gamma subunit chain (IL2RG,
hIL-2Rg) precursor; cytokine receptor common gamma
chain (gamma-C) precursor; CD132 antigen; p64

<400> 83

```
gaagagcaag cgccatgttg aagccatcat taccattcac atccctctta ttcctgcagc 60
tgcccctgct gggagtgggg ctgaacacga caattctgac gccaatggg aatgaagaca 120
ccacagctga tttcttcctg accactatgc ccactgactc cctcagtgtt tccactctgc 180
ccctcccaga ggttcagtgt tttgtgttca atgtcgagta catgaattgc acttggaaca 240
gcagctctga gcccagcctt accaacctca ctctgcatta ttggtacaag aactcggata 300
atgataaagt ccagaagtgc agccactatc tattctctga agaaatcact tctggctgtc 360
agttgcaaaa aaaggagatc cacctctacc aaacatttgt tggtcagctc caggaccac 420
gggaacccag gagacaggcc acacagatgc taaaactgca gaatctgggtg atcccctggg 480
ctccagagaa cctaacactt cacaactga gtgaatccca gctagaactg aactggaaca 540
acagattcct gaaccactgt ttggagcact tgggtgcagta ccggactgac tgggaccaca 600
gctggactga acaatcagtg gattatagac ataagttctc cttgcctagt gtggatgggc 660
agaaacgcta cacgtttcgt gttcggagcc gctttaaccc actctgtgga agtgctcagc 720
attggagtga atggagccac ccaatccact gggggagcaa tacttcaaaa gagaatcctt 780
tcctgtttgc attggaagcc gtggttatct ctgttggtc catgggattg attatcagcc 840
ttctctgtgt gtatttctgg ctggaacgga cgatccccg aattcccacc ctgaagaacc 900
tagaggatct tgttactgaa taccacggga acttttcggc ctggagtggg gtgtctaagg 960
gactggctga gactctgcag ccagactaca gtgaacgact ctgcctcgtc agtgagattc 1020
ccccaaaagg aggggccctt ggggaggggc ctggggcctc cccatgcaac cagcatagcc 1080
cctactgggc ccccccattg tacaccctaa agcctgaaac ctgaacccca atcctctgac 1140
agaagaaccc cagggtcctg tagccctaag tggtaactaa tttccttcat tcaaccacc 1200
tgcgctctcat actcacctca cccactgtg gctgatttgg aattttgtgc ccccatgtaa 1260
gcaccccttc atttggcatt cccacttga gaattaccct tttgccccga acatgttttt 1320
cttctccctc agtctggccc ttccttttcg caggattctt cctccctccc tctttccctc 1380
ccttctctt tccatctacc ctccgattgt tctgaaccg atgagaaata aagtttctgt 1440
tgataatcat c 1451
```

<210> 84

<211> 1071

<212> DNA

<213> Homo sapiens

<220>

<223> complement factor D (DF) precursor; adipsin; C3
convertase activator; properdin factor D

<400> 84

```
gcagttcttg tcttcctagg agcgggcggc tgcgcgggcg ggccccgtgg tcggatgctg 60
ggcggcagag agggccgagg gcacgcgcgg ccctacatgg cgtcgggtgca gctgaacggc 120
gcgcacctgt gcgcaggcgt cctggtggcg gagcggtggg tgctgagcgc ggcgcaactgc 180
ctggaggacg cggccgacgg gaaggtgcag gttctcctgg gcgcgcactc cctgtcgcag 240
ccggagccct ccaagcgccct gtacgacgtg ctccgcgcag tgccccaccc ggacagccag 300
cccgaacca tcgaccacga cctcctgctg ctacagctgt cggagaaggc cacactgggc 360
cctgctgtgc gccccctgcc ctggcagcgc gtggaccgcg acgtggcacc gggaactctc 420
tgcgacgtgg ccggctgggg catagtcaac cagcgggggc gccgcccggg cagcctgcag 480
cacgtgctct tgccagtgct ggaccgccc accctgaacc ggcgacgca ccacgacggc 540
gccatcacgg agcgcttgat gtgcgcggag agcaatcgcc gggacagctg caagggtgac 600
tccggggggc cgctggtgtg cgggggctg ctcgagggcg tggtcacctc gggctcgcgc 660
gtttgcgcca accgcaagaa gcccgggatc tacacccgcg tggcgagcta tgcggcctgg 720
atcgacagcg tcttgcccta ggggtgccgg gcctgaaggc cagggtcacc caagcaacaa 780
agtcccagc aatgaagtca tccactcctg catctgggtg gtctttattg agcacctact 840
atatgcagaa ggggaggccg aggtgggagg atcattggat ctacaggagt ggagatcagc 900
atgggccacg tagcgcgact ccatctctac aaataaataa aaattagctg ggcaattggc 960
gggcatggag gtgggtgctt gtagttccag ctactcagga ggctgaggtg ggaggatgac 1020
ttgaacgcag gaggctgagg ctgcagttag ttgtgattgc accactgccc t 1071
```

<210> 85

<211> 1192

<212> DNA

<213> Homo sapiens

<220>

<223> CD9 antigen; leukocyte antigen MIC3;
motility-related protein-1 (MRP-1); tetraspanin-29
(Tspan-29)

<400> 85

```
cgcgcccccc agtcccgcac ccgttcggcc caggctaagt tagccctcac catgccggtc 60
aaaggaggca ccaagtgcac caaatacctg ctgttcggat ttaacttcat cttctggctt 120
gccgggattg ctgtccttgc cattggacta tggctccgat tcgactctca gaccaagagc 180
atcttcgagc aagaaactaa taataataat tccagcttct acacaggagt ctatattctg 240
atcgagcccg gcgcctcat gatgctggtg ggcttcctgg gctgctgcgg ggctgtgcag 300
gagtcccagt gcatgctggg actgttcttc ggcttcctct tggatgattt cgccattgaa 360
atagctgcgg ccattctggg atattccac aaggatgagg tgattaagga agtccaggag 420
ttttacaagg acacctacaa caagctgaaa accaaggatg agccccagcg ggaaacgctg 480
aaagccatcc actatgcgtt gaactgctgt ggtttggctg ggggcgtgga acagtttatc 540
tcagacatct gccccaagaa ggacgtactc gaaaccttca ccgtgaagtc ctgtcctgat 600
gccatcaaag aggtcttcga caataaatc cacatcatcg gcgcagtggg catcggcatt 660
gccgtggtca tgatatttgg catgatcttc agtatgatct tgtgctgtgc tatccgcagg 720
aaccgcgaga tggcttagag tcagcttaca tccctgagca ggaaagttaa cccatgaaga 780
ttgggtggat tttttgtttg tttgttttgt tttgttttgt gtttgttgtt tgtttttttg 840
ccactaattt tagtattcat tctgcattgc tagataaaaag ctgaagttac tttatgtttg 900
tcttttaatt cttcattcaa tattgacatt tgtagttag cggggggttt ggtttgtctg 960
gtttatattt ttcagttggt tgtttttgct tgttatatta agcagaaatc ctgcaatgaa 1020
aggtactata tttgctagac tctagacaag atattgtaca taaaagaatt tttttgtctt 1080
taaatagata caaatgtcta tcaactttta tcaagttgta acttatattg aagacaattt 1140
gatacataat aaaaaattat gacaatgaaa aaaaaaaaaa aaaaaaaaaa gg 1192
```

<210> 86

<211> 213

<212> DNA

<213> Homo sapiens

<220>
 <223> MHC HLA DG; protein 41; clone pcDG-79

<400> 86
 ccaccgaaag tactgaccaa gtgccaggaa gaggtcagcc acatccctgc tgtccacccg 60
 ggttcattca ggcccaagtg cgacgagaaac ggcaactatc tgccactcca gtgctatggg 120
 agcatcggct actgctgggt tgtcttcccc aacggcacgg aggtcccca caccagaagc 180
 cgcgggcacc ataactgcag tgagtcactg gaa 213

<210> 87
 <211> 2880
 <212> DNA
 <213> Homo sapiens

<220>
 <223> defensin 5 (DEF5) preproprotein; defensin alpha 5
 (DEFA5); paneth cell-specific alpha-defensin 5

<400> 87
 caaatataga gactctccaa gggcccaactg agccccaaag gatttggatc aaatatgggtg 60
 atattatgga aatatgtagt aatatcttaa aaatgtgtaa gatatagtct cttttttttt 120
 ttttttaaga gaaggggtct cactatgttt ttaggctggg atcgaactcc tggctctccag 180
 tgatcctccc acctcagcct gtcaaatagc tagaaatata ggcattgtacc accatgctgg 240
 cttaagatgc attctttgac acagcaattc tatttctata agtttatcca tataggtaag 300
 agaacatata tacaagataa tcaactgtaac tttacttatt actgcaaaaag tttaaaaata 360
 accaaattgt aataatttta taatatttta tcagtacaaa aaataagtga tggcatatac 420
 aaaccctggg atagtataag gctattaaaa ttataatagc attccatgta ttttgatata 480
 caaagtgcc aatgttacagg tgaaaaaagc gaagtgcaga atactatgtg taactgttaa 540
 tagtgatggg ttgctgggtc agaactgaag gcctgggggt agaaatgaga gctcatgact 600
 tctacctttt gaatgttgtt ccttgtgcat gatttacaat tttctaaaac taaaaaaaaa 660
 atctcagaaa ggggctgtac gcacctaaat tactttgata ttccccaag tggagagaag 720
 taccgctac acattttatg tgatgcattc agatcacacc aactccttga actaaatccg 780
 aatttttatt ttaatctgat aaacttggtc tactatttta ctgaactcat ttccctata 840
 gcctgataag gtcattgacc tctccatact ggcaccagcg ggagactact cacctcgaga 900
 tctcaaaagc ctctacatg aggttagtaa tatccctgaa tcttgcaatg aattaactct 960
 ctactccact gggctccagg tctgccccca gagagtcac cagagagtac cagggacat 1020
 cttcagaaaa caagaggcat ttgatcccca aacttcttga atgaaagcgc tgttgttttt 1080
 cttttttgaa tatataaaag taaataactca agcagatggg aaacagaaca ggatagtaat 1140
 acccttatca tcattaacac cttggatcaa gaagaggcat taagcataca gactcacgct 1200
 ttgatgaaa ctgggagaaa gaggagcctc aaagggatct tgagaacaaa ggcagtcctt 1260
 cccctcccaa tcacatgccc acctcctctc actgcagctt ctgtctcagg tcttctcccc 1320
 gcagagctat aaatccaggc tgactcctca ctcccccat atccactcct gctctccctc 1380
 ctgcagggtg cccagccat gaggaccatc gccatccttg ctgccattct cctgggtggc 1440
 ctgcaggccc aggtgagtc actccaggaa agagctgatg aggctacaac ccagaagcag 1500
 tctggggaag acaaccagga ccttgctatc tcttttgag gaaatggact ctctgctctt 1560
 agaacctcag gtaggagaca tcaatcttgc acatctgcaa aatctagaaa aaaaggattg 1620
 gagaaaggat ctggagtcaa gtgtggaaa gtctacctca cttgagtga tttacttaat 1680
 cttcctggac cttgattttc tcatctataa attaatacgt gagaaccaa taaatctaaa 1740
 agattttctt ttttctaaga ctttcagctc caagatatct ctgtgaaatt tgctactttt 1800
 aagatagaaa gagctacact gactagtctt ttgtagatct aaatgggcag acttagttat 1860
 atagagagtg ttttactttg tccattggaa aagcttttag aacctagaga ggaacctata 1920
 ggtgtgtttt gatgtaggct aataggcttg attaaatctt tctacaatac atccttagat 1980
 caaaacatca tattgtgtct catacatata cacaattatt gtttgtcaat taaaacaagt 2040
 aaatatgtaa aatgttaaaa aaaaaaaaaa aaaaaaaagg agagacagag aatgaagaat 2100
 ttgaatttgg aaagtcttca aagactcctt gagcaccaaa gtatttggtc catgacatta 2160
 gcatgcacaa tgcggcattt cagaaactga ttcagggtgt ttagggagcc ttgtaggac 2220
 ctggaaatca cacatggagg tcaagattag gcgtgtggat gaagcagaat gaagagttag 2280
 taacctgag gttgagagg atattgttgg accaggagc aggtataaaa tacatcctgg 2340
 atagactcac atggggaaaa aaactatgat cttgcatgac taacacatag ctagtaagat 2400
 ttcttgtcac ttacgacaaa gacatgaatt tttccatcc taacatgact gatacagtgt 2460
 ctcttattta gactatctca gttagtctgg ctgtgcttgt cctttttccc acctccctcg 2520

```

ctgtgcctga ccctctcttc tttccacagg ttctcaggca agagccacct gctattgccg 2580
aaccggccgt tgtgctaccc gtgagtcocct ctccgggggtg tgtgaaatca gtggccgcct 2640
ctacagactc tgctgtcgct gagcttccta gatagaaacc aaagcagtgc aagattcagt 2700
tcaaggctct gaaaaaagaa aaacattttta ctctgtgtac cttgtgtctt tctaaatttc 2760
tctctccaaa ataaagtcca agcattaaac ttagtgtgtt tgaccttttt aattttcttt 2820
tctttttcct tttttttctt ttgctttggt atatggtggt ttgtatggtt cctttgtatt 2880

```

```

<210> 88
<211> 3060
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> defensin 6 (DEF6, HD-6) preproprotein; defensin
      alpha 6 (DEFA6) precursor; paneth cell-specific
      alpha-defensin 6

```

```

<400> 88
attcagcaca attcctatca aaatcccccatt ggcattcttt acagaaataa aaaaaaaatc 60
ctaaaatttg tatgaaatgg tgaaagaacc caaatagaca aaacaattct gagaaaaaaa 120
aacaaggttg aagacatcac aattcctggt tttaaattat attacaaagc tacggtaatc 180
aaaacaatat ggtattggca taaaaccaga cacataccag tgaaataaaa ttgagagtcc 240
agaaacacat cgaaacacat atggtcaagt aacttttgac aatggcatga agaagacaca 300
atagggacag gagagtctct tcaataaatg gtggtgggaa tactatttcc atatgcaaaa 360
caataaaact ggacccttct cttttggcat atacaaaact taactcaaaa tggataaaat 420
acctgataga agaccagaaa caagagacta tgaaaataat ggtagagtcc tatatgtttt 480
gagctacaaa gtattcaaat tacagcatta gggagaaaaa acaaagcaca aaccaatgtt 540
taatttttaa gtggagattt cctggagcag agctgcaggg ctggggcaag gatggaggct 600
cattactcct tttacccttt gaatggtcct tgtgggcaat tcaacatttt ctaaaattaa 660
aaataaaaata aaatttcaga ggggggattgt gggcatgtca attgttttca tattttctca 720
agtggagaga aatacctagt acatattttta cttgatatac tcagatcaca tgggttttct 780
gaaataaatc ttttggtctt agttttacta actctttacc tagtatccca ctgagcttct 840
ttcccttata ggctgataag gtcattatct tctccacact gtgccccaca agagcctatt 900
caccocataa tctcaaagcc tcttccatga gggcagaaat gccccctgaa tcttgcaatg 960
aattaactct ctactctagc gggatccagc tctggcctca aggtctacac ctccagagag 1020
tggccagccc caccttcaga aaataagagg catttgattc ctgaaattat tcattgaaag 1080
cactgttctt ttcttttttg aatattaaca agtaaattat ccagcagatg gaaaacagga 1140
caatgtaaca ctgttcttat catcactatc agctgggacc agaacagaca ctcaataaac 1200
agcctcacac tacaatgaag cttggagaac aaaggagcat caaagggaca tggaggggcaa 1260
gggtagctct tctgctcccc aatcacatgc actcccgtc tcaccgcaac atctgtccct 1320
gagccttctc caagcagacc tataaatcca ggctggctcc tcaactccca cacatctgt 1380
cctgctctct ctccctcagc gaccctagcc atgagaaccc tcaccatcct cactgctgtt 1440
ctcctcgtgg cctccaggc caaggctgag ccaactccaag ctgaggatga tccactgcag 1500
gcaaaaagct atgaggctga tgcccaggag cagcgtgggg caaatgacca ggactttgcc 1560
gtctcctttg cagaggatgc aagctcaagt cttagagctt tgggtaagag acaccagcat 1620
tgacagagct ggagtgtaga gaggaaaacc aagcacttct agaattagat ccaacagctg 1680
gctctttctc ttaggtgatc acctccccag gcctcaatta ctttatgttt gtactgaaaa 1740
ggaagaatca gtgatattca aggcatgact tttctctaaa gattttttta ttctatgata 1800
agtctatgaa attttctaatt tttttgccat gtagaaattg attgaggagt ctctacttca 1860
aggaagagag cctaatttta aaggaatgtt ttgttttgct ttgttttggt ttgttttggt 1920
tgatggagtc tcgctctgtc acccaggctg gagtgcagtg gcactatctc agatcactgc 1980
aacctctgcc tcttggttcc aagcaattct ctccctcagc ctcccaagtc actaggatta 2040
caggcaccag acaccaagcc tggctaaatt ttgtattttt tttttttcag tagagacggg 2100
gtttcaccat cttggccagg ctagtcttga actcctgacc ttgtgataaa ccacacttgg 2160
cctcccaaag tgctgggatt acaggcgtaa gccaccacat ccagctgcta aaggaatgtt 2220
ttttaatctg acttttatag gaaccgttgg aaactggaga cagtcatatg ggtgcattca 2280
gatgtgtgtg tgacagggaa ggagcagata agtacagcat atcagaatgg gtctctaata 2340
ctgtgtgtga ccaacactgc tctgcgtatt tattcctatt gatggtgtga tcatgctatt 2400
ggctgtaatg cagccagcat tacatgtcag caagcatgca acttccctgaa gattctcttt 2460
actgcccgtc gctgacctg gtgctcaatt tctgatgctc tctctctctg tccccaggct 2520

```

caacaagggc	tttcacttgc	cattgcagaa	ggtcctgtta	ttcaacagaa	tattcctatg	2580
ggacctgcac	tgtcatgggt	attaaccaca	gattctgctg	cctctgaggg	atgagaacag	2640
agagaaatat	attcataatt	tactttatga	cctagaagga	aactgtcgtg	tgctctatac	2700
attgccatca	actttgtttc	ctcatctcaa	ataaagtcct	ttcagcaagt	tcttttgtgt	2760
ttgtgctttt	ctgggtgtttg	ataattcagg	attcttcaga	tgcaaaaaca	aaaacccaag	2820
tcgtatctca	gaacactagc	tcttcgaaag	agttttctat	gtagaccaga	gaagtggtag	2880
agaggatgtt	gagagaagag	aggatttggg	ttttttgttt	ttttgttttt	tgctttctga	2940
gatggagtct	cgctctgttg	cccaggctgc	agtgcagtgg	cacaatcttg	gctcactgaa	3000
acctttacct	cctgggttca	agtgattctc	ctgcctcagc	ctcccaagta	gctgggatta	3060

<210> 89

<211> 1778

<212> DNA

<213> Homo sapiens

<220>

<223> matrix metalloproteinase 12 (MMP-12)
preproprotein; macrophage metalloelastase (HME)
precursor; macrophage elastase (ME)

<400> 89

tagaagttta	caatgaagtt	tcttctaata	ctgctcctgc	aggccactgc	ttctggagct	60
cttccccctga	acagctctac	aagcctggaa	aaaaataatg	tgctatttgg	tgagagatac	120
ttagaaaaat	tttatggcct	tgagataaac	aaacttccag	tgacaaaaat	gaaatatagt	180
ggaaacttaa	tgaaggaaaa	aatccaagaa	atgcagcact	tcttggtgtc	gaaagtgacc	240
gggcaactgg	acacatctac	cctggagatg	atgcacgcac	ctcgatgtgg	agtccccgat	300
ctccatcatt	tcagggaaat	gccagggggg	cccgtatgga	ggaaacatta	tatcacctac	360
agaatcaata	attacacacc	tgacatgaac	cgtgaggatg	ttgactacgc	aatccggaaa	420
gctttccaag	tatggagtaa	tgttaccccc	ttgaaattca	gcaagattaa	cacaggcatg	480
gctgacattt	tggtggtttt	tgcccgtgga	gctcatggag	acttccatgc	ttttgatggc	540
aaaggtggaa	tcctagccca	tgcttttggg	cctggatctg	gcattggagg	ggatgcacat	600
ttcgatgagg	acgaattctg	gactacacat	tcaggaggca	caaacttggt	cctcactgct	660
gttcacgaga	ttggccattc	cttaggtctt	ggccattcta	gtgatccaaa	ggctgtaatg	720
ttccccacct	acaaatatgt	cgacatcaac	acatttcgcc	tctctgctga	tgacatacgt	780
ggcattcagt	ccctgtatgg	agacccaaaa	gagaaccaac	gcttgccaaa	tcctgacaat	840
tcagaaccag	ctctctgtga	ccccaatttg	agttttgatg	ctgtcactac	cgtgggaaat	900
aagatctttt	tcttcaaaga	caggttcttc	tggttgaagg	tttctgagag	accaaagacc	960
agtgttaatt	taattttctt	cttatggcca	accttgccat	ctggcattga	agctgcttat	1020
gaaattgaag	ccagaaatca	agtttttctt	tttaaagatg	acaaatactg	gttaatttagc	1080
aattttaagac	cagagccaaa	ttatcccaag	agcatacatt	cttttggttt	tcctaacttt	1140
gtgaaaaaaaa	ttgatgcagc	tgtttttaac	ccacgttttt	ataggacct	cttctttgta	1200
gataaccagt	attggaggta	tgatgaaagg	agacagatga	tggaccctgg	ttatcccaaa	1260
ctgattacca	agaacttcca	aggaatcggg	cctaaaattg	atgcagtctt	ctattctaaa	1320
aacaaatact	actatttctt	ccaaggatct	aaccaatttg	aatatgactt	cctactccaa	1380
cgtatcacca	aaacactgaa	aagcaatagc	tggtttgggt	gttagaaatg	gtgtaattaa	1440
tggtttttgt	tagttcactt	cagcttaata	agtattttatt	gcatatttgc	tatgtcctca	1500
gtgtaccact	acttagagat	atgtatcata	aaaataaaat	ctgtaaacca	taggtaattga	1560
ttatataaaa	tacataatat	ttttcaattt	tgaaaactct	aattgtccat	tcttgcttga	1620
ctctactatt	aagtttgaaa	atagttacct	tcaaagcaag	ataattctat	ttgaagcatg	1680
ctctgtaagt	tgcttccata	catccttggg	ctgagaaatt	atacttactt	ctggcataac	1740
taaaattaag	tatatatat	ttggctcaaa	taaaattg			1778

<210> 90

<211> 2334

<212> DNA

<213> Homo sapiens

<220>

<223> matrix metalloproteinase 9 (MMP-9); gelatinase B
(GELB) precursor; macrophage gelatinase; 92K
gelatinase; type IV collagenase (CLG4A)

<400> 90

```
agacacctct gccctcacca tgagcctctg gcagcccttg gtcctggtgc tcctggtgct 60
gggctgctgc tttgctgccc ccagacagcg ccagtcacc cttgtgctct tccctggaga 120
cctgagaacc aatctcaccg acaggcagct ggcagaggaa tacctgtacc gctatgggta 180
cactcgggtg gcagagatgc gtggagagtc gaaatctctg gggcctgctg tgctgcttct 240
ccagaagcaa ctgtccctgc ccgagaccgg tgagctggat agcgccacgc tgaaggccat 300
gcgaacccca cgggtgcgggg tcccagacct gggcagattc caaacctttg agggcgacct 360
caagtggcac caccacaaca tcacctattg gatccaaaac tactcggaag acttgccgcg 420
ggcgggtgatt gacgacgcct ttgccgcgcg cttcgactg tggagcgcgg tgacgccgct 480
caccttcaact cgcgtgtaca gccgggacgc agacatcgtc atccagtttg gtgtcgcgga 540
gcacggagac gggatatccct tcgacgggaa ggacgggctc ctggcacacg cctttcctcc 600
tggccccggc attcagggag acgcccattt cgacgatgac gagttgtggt ccctgggcaa 660
gggcgtcgtg gttccaactc ggtttggaaa cgcagatggc gcggcctgcc acttccccct 720
catcttcgag ggccgctcct actctgcctg caccaccgac ggtcgctccg acggcttgcc 780
ctggtgcagt accacggcca actacgacac cgacgaccgg tttggcttct gccccagcga 840
gagactctac acccgggacg gcaatgctga tgggaaaccc tgccagtttc cattcatctt 900
ccaaggccaa tccactccg cctgcaccac ggacggtcgc tccgacggct accgctggtg 960
cgccaccacc gccaaactacg accgggacaa gctcttcggc ttctgcccga cccgagctga 1020
ctcgacggtg atggggggca actcggcggg ggagctgtgc gtcttcccct tcaactttct 1080
gggtaaggag tactcgacct gtaccagcga gggccgcgga gatgggccc tctggtgcgc 1140
taccacctcg aactttgaca gcgacaagaa gtggggcttc tgcccggacc aaggatacag 1200
tttgttcctc gtggcggcgc atgagttcgg ccacgcgtg ggcttagatc attcctcagt 1260
gccggaggcg ctcatgtacc ctatgtaccg cttactgag gggccccctc tgcataagga 1320
cgacgtgaat ggcacccggc acctctatgg tctcgcctc gaacctgagc cacggcctcc 1380
aaccaccacc acaccgcagc ccacggctcc cccgacggtc tgccccaccg gacccccccac 1440
tgtccacccc tcagagcgcc ccacagctgg cccacaggt cccccctcag ctggccccac 1500
aggtcccccc actgctggcc cttctacggc cactactgtg cctttgagtc cgggtggacga 1560
tgcttgaac gtgaacatct tcgacgcat cgcggagatt gggaaccagc tgtatttgtt 1620
caaggatggg aagtactggc gattctctga gggcagggg agcggccgc agggccccct 1680
ccttatcgcc gacaagtggc ccgcgctgcc ccgcaagctg gactcggctt ttgaggagcc 1740
gctctccaag aagcttttct tcttctctgg gcgccaggtg tgggtgtaca caggcgctc 1800
ggtgctgggc ccgaggcgctc tggacaagct gggcctggga gccgacgtgg ccaggtgac 1860
cggggccctc cggagtggca gggggaagat gctgctgttc agcgggcggc gcctctggag 1920
gttcgacgtg aaggcgaga tgggtgatcc ccggagcgcc agcaggtgg accggatgtt 1980
ccccggggtg cctttggaca cgcacgacgt cttccagtac cgagagaaag cctattttct 2040
ccaggaccgc ttctactggc gcgtgagttc ccgagtgag ttgaaccagg tggaccaagt 2100
gggctacgtg acctatgaca tctgacgtg cctgagggac tagggctccc gtctctgttt 2160
gcagtgccat gtaaatcccc actgggacca accctgggga aggagccagt ttgccggata 2220
caaactggta ttctgttctg gaggaaggag aggagtggag gtgggctggg ccctctcttc 2280
tcacctttgt tttttgttgg agtgtttcta ataaacttgg attctctaac cttt 2334
```

<210> 91

<211> 1970

<212> DNA

<213> Homo sapiens

<220>

<223> matrix metalloproteinase 1 (MMP-1) preproprotein;
type I interstitial collagenase; fibroblast
collagenase; tissue collagenase

<400> 91

```
atattggagt agcaagagggc tgggaagcca tcacttacct tgcactgaga aagaagacaa 60
aggccagtat gcacagcttt cctccactgc tgctgctgct gttctggggg gtggtgtctc 120
acagcttccc agcgactcta gaaacacaag agcaagatgt ggacttagtc cagaaatacc 180
tggaataata ctacaacctg aagaatgatg ggaggcaagt tgaaaagcgg agaaatagt 240
```

gcccagtggt	tgaaaaattg	aagcaaatgc	aggaattctt	tgggctgaaa	gtgactggga	300
aaccagatgc	tgaaaccttg	aaggtgatga	agcagcccag	atgtggagtg	cctgatgtgg	360
ctcagtttgt	cctcactgag	gggaaccctc	gctgggagca	aacacatctg	acctacagga	420
ttgaaaatta	cacgccagat	ttgccaaagag	cagatgtgga	ccatgccatt	gagaaagcct	480
tccaactctg	gagtaatgtc	acacctctga	cattcaccaa	ggtctctgag	ggtcaagcag	540
acatcatgat	atcttttgtc	aggggagatc	atcggggacaa	ctctcctttt	gatggacctg	600
gaggaaatct	tgctcatgct	tttcaaccag	gcccaggtat	tggaggggat	gtcatttttg	660
atgaagatga	aaggtggacc	aacaatttca	gagagtacaa	cttacatcgt	gttgcggtctc	720
atgaactcgg	ccattctctt	ggactctccc	attctactga	tatcggggct	ttgatgtacc	780
ctagctacac	cttcagtggt	gatgttcagc	tagctcagga	tgacattgat	ggcatccaag	840
ccatatatgg	acgttcccaa	aatcctgtcc	agcccatcgg	cccacaaacc	ccaaaagcat	900
gtgacagtaa	gctaaccttt	gatgctataa	ctacgattcg	gggagaagtg	atgttcttta	960
aagacagatt	ctacatgcgc	acaaatccct	tctaccggga	agttgagctc	aatttctattt	1020
ctgttttctg	gccacaaactg	ccaaatgggc	ttgaagctgc	ttacgaattt	gccgacagag	1080
atgaagtccg	gtttttcaaaa	gggaataagt	actgggctgt	tcagggacag	aatgtgctac	1140
acggataccc	caaggacatc	tacagctcct	ttggcttccc	tagaactgtg	aagcatatcg	1200
atgctgctct	ttctgaggaa	aacactggaa	aaacctactt	ctttgttgct	aacaaatact	1260
ggaggtatga	tgaatataaa	cgatctatgg	atccagggtta	tcccaaaatg	atagcacatg	1320
actttcctgg	aattggccac	aaagttgatg	cagttttcat	gaaagatgga	tttttctatt	1380
tctttcatgg	aacaagacaa	tacaaatttg	atcctaaaac	gaagagaatt	ttgactctcc	1440
agaaagctaa	tagctgggtc	aactgcagga	aaaattgaac	attactaatt	tgaatggaaa	1500
acacatgggt	tgagtcctaa	gaaggtgttt	tcctgaagaa	ctgtctattt	tctcagtcac	1560
ttttaacctc	tagagtcact	gatacacaga	atataatctt	atttatacct	cagtttgcac	1620
atttttttac	tattttagaat	gtagcccttt	ttgtactgat	ataatttagt	tccacaaatg	1680
gtgggtacaa	aaagtcaagt	ttgtggctta	tggattcata	taggccagag	ttgcaaagat	1740
cttttccaga	gtatgcaact	ctgacgttga	tcccagagag	cagcttcagt	gacaaacata	1800
tcctttcaag	acagaaagag	acaggagaca	tgagtctttg	ccggaggaaa	agcagctcaa	1860
gaacacatgt	gcagtcactg	gtgtcaccct	ggataggcaa	gggataactc	ttctaacaca	1920
aaataagtgt	tttatgtttg	gaataaagtc	aacctgtgtt	ctactgtttt		1970

<210> 92
 <211> 1801
 <212> DNA
 <213> Homo sapiens

<220>
 <223> matrix metalloproteinase 3 (MMP-3) preproprotein;
 stromelysin 1 (SL-1) precursor, preprostromelysin;
 proteoglycanase; progelatinase; transin-1

gcaaggcata	gagacaacat	agagctaagt	aaagccagtg	gaaatgaaga	gtcttccaat	60
cctactgttg	ctgtgcgtgg	cagtttgctc	agcctatcca	ttggatggag	ctgcaagggg	120
tgaggacacc	agcatgaacc	ttgttcagaa	atatctagaa	aactactacg	acctcaaaaa	180
agatgtgaaa	cagtttggtta	ggagaaagga	cagtggctct	gttggttaaaa	aaatccgaga	240
aatgcagaag	ttccttggtat	tggaggtgac	ggggaagctg	gactccgaca	ctctggaggt	300
gatgcgcaag	cccaggtgtg	gagttcctga	tgttgggtcac	ttcagaacct	ttcctggcat	360
cccgaagtgg	aggaaaaccc	accttacata	caggattgtg	aattatacac	cagattttgcc	420
aaaagatgct	gttgattctg	ctgttgagaa	agctctgaaa	gtctgggaag	aggtgactcc	480
actcacattc	tccaggctgt	atgaaggaga	ggctgatata	atgatctctt	ttgcagttag	540
agaacatgga	gacttttacc	cttttgatgg	acctggaaat	gttttggtccc	atgcctatgc	600
ccctggggcca	gggattaatg	gagatgccca	ctttgatgat	gatgaacaat	ggacaaagga	660
tacaacaggg	accaatttat	ttctcgttgc	tgctcatgaa	attggccact	ccctgggtct	720
ctttcactca	gccaacactg	aagctttgat	gtacccactc	tatcactcac	tcacagacct	780
gactcggttc	cgcctgtctc	aagatgatat	aaatggcatt	cagtccctct	atggacctcc	840
ccctgactcc	cctgagaccc	ccctggtacc	cacggaacct	gtccctccag	aacctgggac	900
gccagccaac	tgtgatcctg	ctttgtcctt	tgatgctgtc	agcactctga	ggggagaaat	960
cctgatcttt	aaagacaggc	acttttggcg	caaatccctc	aggaagcttg	aacctgaatt	1020
gcatttgatc	tcttcatttt	ggcatctct	tccttcaggc	gtggatgccg	catatgaagt	1080
tactagcaag	gacctcgttt	tcatttttaa	aggaatcaa	ttctgggcca	tcagaggaaa	1140
tgagggtacga	gctggatacc	caagaggcat	ccacacccta	ggtttccctc	caaccgtgag	1200

```

gaaaatcgat gcagccattt ctgataagga aaagaacaaa acatatttct ttgtagagga 1260
caaatactgg agatttgatg agaagagaaa ttccatggag ccaggctttc ccaagcaaat 1320
agctgaagac tttccaggga ttgactcaaa gattgatgct gtttttgaag aatttgggtt 1380
cttttatttc tttactggat cttcacagtt ggagtttgac ccaaagcaaa agaaagtgaac 1440
acacactttg aagagtaaca gctggcttaa ttgttgaaa agatatgtag aaggcacaat 1500
atgggcactt taaatgaagc taataattct tcacctaaag ctctgtgaat tgaaatgttc 1560
gttttctcct gcctgtgctg tgactcgagt cacactcaag ggaacttgag cgtgaatctg 1620
tatcttgccg gtcattttta tgttattaca gggcattcaa atgggctgct gcttagcttg 1680
caccttgcca catagagtga tctttcccaa gagaaggga agcactcgtg tgcaacagac 1740
aagtgaactg atctgtgtag actatttgct tatttaataa agacgattg tcagttgttt 1800
t

```

1801

```

<210> 93
<211> 2309
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> elastase-specific inhibitor (ESI); elafin precursor; protease
inhibitor 3 (PI3), skin derived (SKALP); skin-derived
anti-leukoprotease; whey acidic protein (WAP) four-disulfide
core domain protein 14; protease inhibitor WAP3

```

```

<220>
<221> modified_base
<222> (2255)..(2256)
<223> n = g, a, c or t

```

```

<400> 93
tttgtcttca agagtttttc gagaccaggg aagaaggaag gaaatgccca gtttgatcgt 60
gggagtggta aaatgataaa gtagatctgg gtggggtttg tagcaccaga gcataatgga 120
gaaacacctt ggttttgtaa tcaagactgg atctaccagt gacttgctga ataactcgg 180
tgattccttt ctcttcttgg gtctcactgt atttcaaaac atgaagaatt tcattgtaat 240
gttacctaata agtgagacca gcacttctac tctgtgagaa agtaggaaaa ctcttgggac 300
aatcagagat gatgtgatgt aatgtccatt agttcttctt gtgaataatc ctgaggggaaa 360
gccccaggt ccctcccaga atgggggtgga tatttcccaa tacagctaag gaattatccc 420
ttgtaaatac cacagaccgg ccctggagcc agggccaagct ggactgcata aagattggta 480
tggccttagc tcttagccaa acaccttctt gacaccatga gggccagcag cttcttgatc 540
tggtgtgtgt tctctatcgc tgggacgctg gttctagagg cagctgtcac gggaggtgag 600
tgaacaggtg acctgctggg ctgggttgga ctaaggggag accctctgga caccctgggc 660
caggacaggg agcactactg aagcagtagg cagcactgga gccagattt cagctttctg 720
ttctttgcca tcatattcag aaaaaatagg actttggctg gtggactcca cgtgctttcc 780
acctcagtga ctgagatata aggactgttt gtggaagtaa tgttggtatg tggccttggc 840
ctcagatgtc aatacctgtg cagaatgtgc aataaaaataa tgaactccag gattttaaac 900
cttggggtgtg gacacagtcc ccgtttctct gcccataaaa agcactggag taatcagtac 960
tctaaaagga ggttaagaaa caacaagcct tcagggaatca tgttggttga ggaccccat 1020
tttataagga gggaaaccaa aatgtagaaa tgagttagca attgccaagg taattcccag 1080
agccaggatg gggctcaagt ctccctagat gtggctcagg gttctttctt actccaatgc 1140
acttcttaac aaatgacaat gtgtcctctt cactgtggg tgtcaccaca gtctgaccac 1200
tgctcctgag agacttgagg tggaggaagg ggggaagaaac aaataactcaa ggaactctg 1260
gtcctgtaga ccaccccaaa aaaggaagag ccttccaaga gtgtagctcc cagaggtgta 1320
ccttccctac tcaggccatg gtttgaggat gctgcagtaa gcagtggatg gaccagagac 1380
cagaggaaag acatggcagc tgaagcagag gcttactggg tataaatgtg ggctcgtttc 1440
ttcttttaac agttcctggt aaaggtcaag acactgtcaa aggccgtgtt ccattcaatg 1500
gacaagatcc cgttaaagga caagtttcag ttaaaggcca agataaagtc aaagcgcaag 1560
agccagtcaa aggtccagtc tccactaagc ctggctcctg cccattatc ttgatccggt 1620
gcgccatggt gaatccccct aaccgctgct tgaaagatac tgactgccc ggaatcaaga 1680
agtgtgtgta aggtctctgc gggatggcct gtttcggtcc ccagtgggt gagcactagc 1740
tgggaacaga ggagaccct gaagacacaa aagaaggctg agcgggtggg aagcatccca 1800
gggttggtggg agggaggttg tgggaggtga cagaagact gggagactga ggggtctgag 1860
aggctataac cagagtgcct agaaggatga tctgtcttcc tcaactgcctc tgagtgcctt 1920

```



```

gatgtgctga ctctcacctc tgatactctt ctcttccaca gagggagccg gtccttgctg 1980
cacctgtgcc gtccccagag ctacaggccc catctgggtc taagtccctg ctgcccttcc 2040
ccttccacca ctgtccattc ttctctccat tcaggatgcc cacggctgga gctgcctctc 2100
tcateccactt tccaataaag acttcttctt gctccacttg tttctgggtc ctatgacttc 2160
tgggctcctg gatgcttttg ggaaatggat gtagaattgg gacttcttct ctccagtga 2220
gaggggaaac ggtcccatgg tgaaagagag caggngggag gaaacaagga ggcacatgct 2280
agggttcat attacaatcc aataatcag
2309

```

```

<210> 94
<211> 5086
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> collagen, type I, alpha2; collagen alpha 2(I)
chain precursor; prepro-alpha2(I) collagen
(COL1A2)

```

```

<220>
<221> modified base
<222> (1)..(5086)
<223> n = g, a, c or t

```

```

<400> 94
agcaccacgg cagcaggagg tttcggntca agttggaggt actgggccac gactgcatgc 60
ccgcgcccgc caggtgatac ctccgccggt gaccaggggg ctctgcgaca caaggagtct 120
gcatgtctaa gtgctagaca tgctcagctt tgtggatacg cggactttgt tgctgcttgc 180
agtaacctta tgcctagcaa catgccaatc tttacaagag gaaactgtaa gaaagggccc 240
agccggagat agaggaccac gtggagaaaag gggtcaccca ggccccccag gcagagatgg 300
tgaagatggg cccacaggcc ctctgggtcc acctggctct cctggccccc ctggtctcgg 360
tgggaacttt gctgctcagt atgatggaaa aggagttgga cttggccctg gaccaatggg 420
cttaatggga cctagaggcc cacctgggtg agctggagcc ccaggccctc aaggtttcca 480
aggacctgct ggtgagcctg gtgaacctgg tcaaactggt cctgcaggtg ctctggttcc 540
agctggccct cctggcaagg ctggtgaaga tggtcaccct ggaaaaccgc gacgacctgg 600
tgagagagga gttgttggac cacagggtgc tcgtggtttc cctggaactc ctggacttcc 660
tggcttcaaa ggcattaggg gacacaatgg tctggatgga ttgaagggac agcccggtgc 720
tcttggtgtg aagggtgaac ctggtgcccc tggtgaaaat ggaactccag gtcaaacagg 780
agcccggtgg ctctctgggt agagaggacg tgttggtgcc cctggcccag ctggtgcccc 840
tggcagtgat ggaagtgtgg gtcccggtgg tctgctggtt cccattgggt ctgctgcccc 900
tccaggcttc ccaggtgccc ctggcccccag gggtgaaatt ggagctgttg gtaacgctgg 960
tctgctggtt cccgcccgtc cccgtgggtg agtgggtctt ccaggcctct ccggcccccgt 1020
tggacctcct ggtaatcctg gagcaaacgg ccttactggt gccaaaggtg ctgctggcct 1080
tcccggcggt gctgggggtc ccggcctccc tggacccgcg ggtattcctg gccctgttgg 1140
tgctgccggt gctactgggt ccagaggact tgttggtgag cctggtccag ctggctccaa 1200
aggagagagc ggtaacaagg gtgagcccgg ctctgctggg cccaagggtc ctctgggtcc 1260
cagtgggtgaa gaaggaaaag gaggccctaa tggggaagct ggatctgccg gccctccagg 1320
acctcctggg ctgagaggta gtccctgggt tcgtggtctt cctggagctg atggcagagc 1380
tggcgctcat ggccctcctg gtagtcgtgg tgcaagtggc cctgctggag tccgaggacc 1440
taatggagat gctggtcgcc ctggggagcc tgggtctcat ggaccagag gtcttctcgg 1500
tcccctgga aatatcggcc ccgctggaag agaaggtcct gtcggcctcc ctggcatcga 1560
cggcaggcct ggcccaattg gccagctgg agcaagagga gagcctggca acattggtat 1620
ccctggaccc aaaggcccca ctggtgatcc tggcaaaaac ggtgataaag gtcatgttgg 1680
tcttgctggt gctcgggggt ctccagggtc tgatggaaac aatggtgctc agggacctcc 1740
tggaccacag ggtgttcaag gtggaaaagg tgaacagggt cccgctgggt ctccaggctt 1800
ccagggtctg cctggccccc cagggtccgc tgggtgaagt ggcaaaccag gagaaagggg 1860
tctccatggt gagtttgggt tccctgggtc tgctgggtcca agaggggaac gcggtcccc 1920
aggtagaggt ggtgctgccc gtccctactg tccatttggg agccgagggt cttctggacc 1980
cccaggcct gatggaaaca aggtgaacc tgggtgtggt ggtgctgtgg gactgctgg 2040
tccatctggt cctagtggac tccaggaga gaggggtgct gctggcatac ctggaggcaa 2100
gggagaaaag ggtgaacctg gtctcagagg tgaattggt aaccctggca gagatggtgc 2160
tcgtggtgct catggtgctg taggtgcccc tgggtcctgt ggagccacag gtgaccgggg 2220

```

cgaagctggg	gctgctggtc	ctgctggtcc	tgctgggtcct	cggggaagcc	ctggtgaacg	2280
tggcgagggtc	ggtcctgctg	gccccaaacgg	atttgctggt	ccggctggtg	ctgctggtca	2340
accgggtgct	aaaggagaaa	gaggagccaa	agggcctaag	ggtgaaaacg	gtgttggttg	2400
tcccacaggc	cccgttgag	ctgctggccc	agctgggtcca	aatggtcccc	ccggtcctgc	2460
tggaagtcgt	ggtgatggag	gccccctgg	tatgactggt	ttccctggtg	ctgctggacg	2520
gactggtccc	ccaggaccct	ctggtatttc	tggccctcct	ggtcccccctg	gtcctgctgg	2580
gaaagaaggg	cttcgtggtc	ctcgtggtga	ccaagggtcca	gttggccgaa	ctggagaagt	2640
aggtgcagtt	ggtccccctg	gcttcgctgg	tgagaagggg	ccctctggag	aggctggtac	2700
tgctggacct	cctggcactc	caggtcctca	gggtctctct	ggtgctcctg	gtattctggg	2760
tctccctggc	tcgagaggtg	aacgtggtct	acctggtggt	gctggtgctg	tgggtgaacc	2820
tggctcctct	ggcattgccg	gcctcctcctg	ggcccgtggt	cctcctggtg	ctgtgggtag	2880
tccctggagtc	aacggtgctc	ctggtgaagc	tggctgctgat	ggcaaccctg	ggaacgatg	2940
tccccacaggt	cgcgatggtc	aaccgggaca	caaggagag	cgcggttacc	ctggcaatat	3000
tggctcccggt	ggtgctgcag	gtgcacctgg	tcctcatggc	cccggtgggtc	ctgctggcaa	3060
acatggaaac	cgtggtgaaa	ctggtccctc	tggctcctggt	ggtcctgctg	gtgctggttg	3120
cccaagaggt	cctagtggcc	cacaaggcat	tcgtggcgat	aaggagagagc	ccggtgaaaa	3180
ggggcccgaga	ggtcttcctg	gcttaaaggg	acacaatgga	ttgcaagggtc	tgctggtat	3240
cgctggtcac	catggtgatc	aaggtgctcc	tggctccgtg	ggtcctgctg	gtcctagggg	3300
ccctgctggt	ccttctggcc	ctgctggaaa	agatggtcgc	actggacatc	ctggtacggt	3360
tggacctgct	ggcattcgag	gccctcaggg	tcaccaaggc	cctgctggcc	cccctggtcc	3420
ccctggccct	cctggacctc	cagggtgaag	cgggtggtggt	tatgactttg	gttacgatg	3480
agacttctac	agggtcgacc	agcctcgctc	agcaccttct	ctcagaccca	aggactatga	3540
agttgatgct	actctgaagt	ctctcaacaa	ccagattgag	acccttctta	ctcctgaagg	3600
ctctagaaaag	aaccagctc	gcacatgccg	tgacttgaga	ctcagccacc	cagagtggag	3660
cagtggttac	tactggattg	accctaacca	aggatgcact	atggatgcta	tcaaagtata	3720
ctgtgatttc	tctactggcg	aaacctgtat	ccgggcccaa	cctgaaaaca	tcccagccaa	3780
gaactggtat	aggagctcca	aggacaagaa	acacgtctgg	ctaggagaaa	ctatcaatgc	3840
tggcagccag	tttgaatata	atgtagaagg	agtgacttcc	aaggaaatgg	ctacccaact	3900
tgcttcatg	cgctgctgg	ccaactatgc	ctctcagaac	atcacctacc	actgcaagaa	3960
cagcattgca	tacatggatg	aggagactgg	caacctgaaa	aaggctgtca	ttctacaggg	4020
ctctaattgat	gttggaacttg	ttgctgaggg	caacagcagg	ttcacttaca	ctgttcttgt	4080
agatggctgc	tctaaaaaga	caaataaatg	gggaaagaca	atcattgaat	acaaaacaaa	4140
taagccatca	cgctgcctc	tccttgatat	tgcacctttg	gacatcggtg	gtgctgacca	4200
tgaattcttt	gtggacattg	gcccagttctg	tttcaaataa	atgaactcaa	tctaaattaa	4260
aaaagaaaaga	aatttgaaaa	aactttctct	ttgccatttc	ttcttcttct	tttttaactg	4320
aaagctgaat	ccttccattt	cttctgcaca	tctacttgct	taaattgtgg	gcaaaagaga	4380
aaaagaagga	ttgatcagag	cattgtgcaa	tacagtttca	ttaactcctt	cccccgctcc	4440
ccccaaaatt	tgaatttttt	tttcaacact	cttacacctg	ttatggaaaa	tgtcaacctt	4500
tgtaagaaaa	ccaaaataaa	aattgaaaaa	taaaaacat	aaacatttgc	accacttgtg	4560
gcttttgaat	atcttccaca	gagggaagtt	taaaacccaa	acttccaaag	gttttaacta	4620
cctcaaaaca	ctttcccatg	agtgtgatcc	acattgttag	gtgctgacct	agacagagat	4680
gaactgaggt	ccttggtttt	ttttgttcat	aatacaaaagg	tgctaattaa	tagtatttca	4740
gatacttgaa	gaatgttgat	ggtgctagaa	gaatttgaga	agaaatactc	ctgtattgag	4800
ttgtatcggtg	tgggtgatatt	tttaaaaaat	ttgatttagc	attcatattt	tccatcttat	4860
tcccaattaa	aagtatgcag	attatttgcc	caaagttgtc	ctcttcttca	gattcagcat	4920
ttgttctttg	ccagtctcat	tttcatcttc	ttccatgggt	ccacagaagc	tttgttctct	4980
gggcaagcag	aaaaattaaa	ttgtacctat	tttgtatatg	tgagatgttt	aaataaattg	5040
tgaaaaaaat	gaaataaagc	atgtttgggt	ttccaaaaga	acatat		5086

<210> 95

<211> 10558

<212> DNA

<213> Homo sapiens

<220>

<223> collagen alpha 3 type VI; type VI collagen alpha3
chain; collagen alpha 3(VI) chain precursor
(COL6A3)

<400> 95

cagtttggag ctcagttcttc caccaaaggc cgttcagttc tcttgggctc cagcctcctg 60

caaggactgc	aagagttttc	ctccgcagct	ctgagtctcc	acttttttgg	tggagaaaagg	120
ctgcaaaaaag	aaaaagagac	gcagtgagtg	ggaaaagtat	gcatacctatt	caaacctaata	180
tgaatcgagg	agcccaggga	cacacgcctt	caggtttgct	caggggttca	tatttgggtgc	240
ttagacaaat	tcaaaatgag	gaaacatcgg	cacttgcctt	tagtggccgt	cttttgcctc	300
tttctctcag	gctttcctac	aactcatgcc	cagcagcagc	aagcagatgt	caaaaatggt	360
gcggtctgtg	atataatatt	tctagtggat	tcctcttggg	ccattggaga	ggaacatttc	420
caacttggtc	gagagtttct	atatgatgtt	gtaaaatcct	tagctgtggg	agaaaatgat	480
ttccattttg	ctctggtcca	gttcaacgga	aaccacata	ccgagttcct	gttaaatacg	540
tatcgtacta	aacaagaagt	cctttctcat	atttccaaca	tgtcttatat	tgggggaacc	600
aatcagactg	gaaaaggatt	agaatacata	atgcaaagcc	acctcaccaa	ggctgctgga	660
agccggggccg	gtgacggagt	ccctcaggtt	atcgtagtgt	taactgatgg	acactcgaag	720
gatggccttg	ctctgccctc	agcggaaact	aagtctgctg	atgttaacgt	gtttgcaatt	780
ggagttgagg	atgcagatga	aggagcgtaa	aaagaaatag	caagtgaacc	gctcaatatg	840
catatgttca	acctagagaa	ttttacctca	cttcattgaca	tagtaggaaa	cttagtgtcc	900
tgtgtgcatt	catccgtgag	tccagaaaagg	gctggggaca	cggaaaaccct	taaagacatc	960
acagcacaag	actctgctga	cattattttc	cttattgatg	gatcaaacia	caccggaagt	1020
gtcaatttcg	cagtcattct	cgacttcctt	gtaaatctcc	ttgagaaact	cccaattgga	1080
actcagcaga	tccgagtggg	ggtggtccag	tttagcgatg	agcccagAAC	catgttttcc	1140
ttggacacct	actccaccaa	ggcccaggtt	ctgggtgcag	tgaagccct	cgggtttgct	1200
ggtggggagt	tggccaatat	cggcctcgcc	cttgatttcg	tgggtggagaa	ccacttcacc	1260
cgggcagggg	gcagcccggt	ggaggaaggg	gttccccagg	tgtctgtcct	cataagtgcc	1320
gggccttcta	gtgacgagat	tcgctacggg	gtggtagcac	tgaagcaggc	tagcgtgttc	1380
tcattcggcc	ttggagccca	ggccgcctcc	agggcagagc	ttcagcacat	agctaccgat	1440
gacaacttgg	tgtttactgt	cccgaatttc	cgtagctttg	gggacctcca	ggagaaatta	1500
ctgccgtaca	ttgttggcgt	ggcccaaagg	cacattgtct	tgaaccgcc	aaccattgtc	1560
acacaagtca	ttgaagtcaa	caagagagac	atagtcttcc	tgggtggatg	ctcatctgca	1620
ctgggactgg	ccaacttcaa	tgccatccga	gacttcattg	ctaaagtcac	ccagaggctg	1680
gaaatcggac	aggatcttat	ccagggtggc	gtggcccagt	atgcagacac	tgtgaggcct	1740
gaattttatt	tcaataccca	tccaacaaaa	agggaaagtca	taaccgctgt	gcggaaaatg	1800
aagcccttgg	acggctcggc	cctgtacacg	ggctctgctc	tagactttgt	tcgtaacaac	1860
ctattcacga	gttcagccgg	ctaccgggct	gccgagggga	ttcctaagct	tttgggtgctg	1920
atcacaggtg	agatgaacct	agtcagcctg	agccagcctg	cccaggagct	gaagagaagc	1980
agcataatgg	cctttgccat	tgggaacaag	ggtgcccgtc	aggctgagct	ggaagagatc	2040
gctttcgact	cctccctggt	gttcatccca	gctgagttcc	gagccgcccc	attgcaaggc	2100
atgctgcttg	gcttgctggc	acctctcagg	acctctcttg	gaacccttga	agttcactca	2160
aacaaaagag	atatcatctt	tcttttggat	ggatcagcca	acgttggaaa	aaccaatttc	2220
ccttatgtgc	gcgactttgt	aatgaacctc	gttaacagcc	ttgatattgg	aatgacaat	2280
attcgtgttg	gttttagtgca	atttagtgac	actcctgtaa	cggagttctc	tttaaacaca	2340
taccagacca	agtcagatat	ccttggtcat	ctgaggcagc	tgcagctcca	gggaggttcg	2400
ggcctgaaca	caggctcagc	cctaagctat	gtctatgcca	accacttcac	ggaagctggc	2460
ggcagcagga	tccgtgaaca	cgtgccgag	ctcctgtctc	tgtcacagc	tgggcagtct	2520
gaggactcct	atttgcaagc	tgccaacgcc	ttgacacggc	cgggcatact	gactttttgt	2580
gtgggagcta	gccaggcgaa	taaggcagag	cttgagcaga	ttgcttttaa	cccaagcctg	2640
gtgtatctca	tggatgattt	cagctccctg	ccagctttgc	ctcagcagct	gattcagccc	2700
ctaaccacat	atgttagtg	aggtgtggag	gaagtaccac	tcgctcagcc	agagagcaag	2760
cgagacattc	tgttcctctt	tgacggctca	gccaatcttg	tgggccagtt	ccctgttgct	2820
cgtgactttc	tctacaagat	tatcgatgag	ctcaatgtga	agccagaggg	gaccogaatt	2880
gcggtggctc	agtacagcga	tgatgtcaag	gtggagtccc	gttttgatga	gcaccagagt	2940
aagcctgaga	tcctgaatct	tgtgaagaga	atgaagatca	agacgggcaa	agccctcaac	3000
ctgggctacg	cgtgggacta	tgcacagagg	tacatttttg	tgaagtctgc	tggcagccgg	3060
atcgaggatg	gagtgttcca	gttcctgggt	ctgctggtcg	caggaaaggtc	atctgaccgt	3120
gtggatgggc	cagcaagtaa	cctgaagcag	agtggggttg	tgcctttcat	cttccaagcc	3180
aagaacgcag	accctgctga	gttagagcag	atcgtgctgt	ctccagcgtt	tatcctggct	3240
gcagagtcgc	ttcccaagat	tggagatctt	catccacaga	tagtgaatct	cttaaaatca	3300
gtgcacaacg	gagcaccagc	accagtttca	ggtgaaaagg	acgtgggtgt	tctgcttgat	3360
ggctctgagg	gcgtcaggag	cggcttccct	ctggtgaaaag	agtttgtcca	gagagtgggtg	3420
gaaagcctgg	atgtgggcca	ggaccgggtc	cgcgtggccg	tgggtgcagta	cagcgaccgg	3480
accaggcccg	agttctacct	gaattcatac	atgaacaagc	aggacgtcgt	caacgctgtc	3540
cgcagctga	ccctgctggg	agggccgacc	cccaacaccg	gggccgcctt	ggagtttgtc	3600
ctgaggaaca	tcctgtctcag	ctctgcggga	agcaggataa	cagaaggtgt	gccccagctg	3660
ctgatcgtcc	tcacggccga	caggtctggg	gatgatgtgc	ggaacccttc	cgtgggtcgtg	3720

aagaggggtg	gggctgtgcc	cattggcatt	ggcatcggga	acgctgacat	cacagagatg	3780
cagaccatct	ccttcatccc	ggacttttgc	gtggccattc	ccacctttcg	ccagctgggg	3840
accgtccaac	aggtcatctc	tgagaggggtg	accagctca	cccgcgagga	gctgagcagg	3900
ctgcagccgg	tgttgacgcc	tctaccgagc	ccaggtgttg	gtggcaagag	ggacgtggtc	3960
tttctcatcg	atgggtccca	aagtgccggg	cctgagttcc	agtacgttcg	cacctcata	4020
gagagggctg	ttgactacct	ggacgtgggc	tttgacacca	cccgggtggc	tgtcatccag	4080
ttcagcgatg	accccaaggc	ggagttcctg	ctgaacgccc	attccagcaa	ggatgaagtg	4140
cagaacgcgg	tgcagcggct	gaggcccaag	ggagggcggc	agatcaacgt	gggcaatgcc	4200
ctggagtagc	tgtccaggaa	catcttcaag	aggcccctgg	ggagccgcat	tgaagagggc	4260
gtcccacagt	tcttggctct	catctcgtct	ggaaagtctg	acgatgaggt	ggtcgtcccg	4320
gcggtggagc	tcaagcagtt	tggcgtggcc	cctttcacga	tgcgccaggaa	cgcagaccag	4380
gaggagctgg	tgaagatctc	gctgagcccc	gaatatgtgt	tctcggtagag	caccttccgg	4440
gagctgcccc	gcctggagca	gaaactgctg	acgcccacat	cgaccctgac	ctcagagcag	4500
atccagaagc	tcttagccag	cactcgctat	ccacctccag	cagttgagag	tgatgctgca	4560
gacattgtct	ttctgatcga	cagctctgag	ggagttaggc	cagatggctt	tgcacatatt	4620
cgagattttg	ttagcaggat	tgttcgaaga	ctcaacatcg	gccccagtaa	agtgaagatt	4680
ggggtcgtgc	agttcagcaa	tgatgtcttc	ccagaattct	atctgaaaac	ctacagatcc	4740
caggccccgg	tgttgagcgc	catacggcgc	ctgaggtctc	gaggggggtc	cccactgaac	4800
actggcaagg	ctctcgaatt	tgtggcaaga	aacctctttg	ttaagtctgc	ggggagtcgc	4860
atagaagacg	gggtgcccc	acacctggct	ctggtcctgg	gtggaaaatc	ccaggacgat	4920
gtgtccaggt	tgcgccaggt	gatccgttcc	tggggcattg	tgagtttagg	ggtaggagac	4980
cggaacatcg	acagaacaga	gctgcagacc	atcaccaatg	accccagact	ggtcttcaca	5040
gtgcgagagt	tcagagagct	tcccaacata	gaagaaagaa	tcatgaactc	gtttggaacc	5100
tccgcagcca	ctcctgcacc	tccaggggtg	gacacccctc	ctccttcacg	gccagagaag	5160
aagaaagcag	acattgtgtt	cctgttggat	ggttccatca	acttcaggag	ggacagtttc	5220
caggaagtgc	ttcgttttgt	gtctgaaata	gtggacacag	tttatgaaga	tggcgactcc	5280
atccaagtgg	ggcttgtcca	gtacaactct	gacccactg	acgaattctt	cctgaaggac	5340
ttctctacca	agaggcagat	tattgacgcc	atcaacaaag	tgggtctaaa	agggggaaga	5400
cacgccaaca	ctaaggtggg	ccttgagcac	ctgcgggtaa	accactttgt	gcctgaggca	5460
ggcagccgcc	tggaccagcg	ggtccctcag	attgcctttg	tgatcacggg	aggaaagtcg	5520
gtggaagatg	cacagatgt	gagcctggcc	ctcaccagaa	gggggggtcaa	agtgtttgct	5580
gttgagtgta	ggaatatcga	ctcggaggag	gttgaaagaa	tagcgtccaa	cagcgccaca	5640
gcgttccgcg	tgggcaacgt	ccaggagctg	tccgaactga	gcgagcaagt	tttggaacct	5700
ttgcatgatg	cgatgcatga	aaccttttgc	cctggtgtaa	ctgatgctgc	caaagcttgt	5760
aatctggatg	tgattctggg	gtttgatggg	tctagagacc	agaatgtttt	tgtggcccg	5820
aagggcttcg	agtccaaggt	ggacgccatc	ttgaacagaa	tcagccagat	gcacagggtc	5880
agctgcagcg	gtggccgctc	gcccaccgtg	cgtgtgtcag	tgggtggccaa	cacgccctcg	5940
ggcccgggtg	aggcctttga	ccttgacgag	taccagccag	agatgctcga	gaagtctccg	6000
aacatgcgca	gccagacccc	ctacgtcctc	acggaggaca	ccctgaagggt	ctacctgaac	6060
aagttcagac	agtcctcgcc	ggacagcgtg	aagttgggtc	ttcattttac	tgatggagca	6120
gacggagatc	tggctgattt	acacagagca	tctgagaacc	tccgccaaga	aggagtccgt	6180
gccttgatcc	tgggtggcct	tgaacgagtg	gtcaacttgg	agcggcta	gcatctgag	6240
tttgggcgag	ggtttatgta	tgacaggccc	ctgaggctta	acttgctgga	ccttgattat	6300
gaactagcgg	agcagcttga	caacattgcc	gagaaagctt	gctgtggggg	tccctgcaag	6360
tgctctgggg	agaggggaga	ccgcggggcc	atcggcagca	tcggggccaaa	gggtattcct	6420
ggagaagacg	gctaccgagg	ctatcctggg	gatgaggggt	gacccgggtga	gcgtggtccg	6480
cctggtgtga	acggcactca	aggtttccag	ggctgcccgg	gccagagagg	agtaaagggc	6540
tctcggggat	tcccaggaga	gaagggcgaa	gtaggagaaa	ttggactgga	tgggtctggat	6600
ggtgaagatg	gagacaaagg	attgcctggg	tcttctggag	agaaaggga	tcctggaaga	6660
aggggtgata	aaggacctcg	aggagagaaa	ggagaaagag	gagatgttgg	gattcgaggg	6720
gacccgggtg	acccaggaca	agacagccag	gagagaggac	ccaaaggaga	aaccggtgac	6780
ctcggcccca	tgggtgtccc	agggagagat	ggagtagctg	gaggacctgg	agaaacctgg	6840
aagaatgggtg	gctttggccg	aaggggaccc	cccggagcta	agggcaacaa	gggcggctct	6900
ggccagccgg	gctttgaggg	agagcagggg	accagagggtg	cacagggccc	agctggtcct	6960
gctggtcctc	cagggtgat	aggagaacaa	ggcatttctg	gacctagggg	aagcggaggt	7020
gcccgtggcg	ctcctggaga	acgaggcaga	accggtccac	tgggaagaaa	gggtgagccc	7080
ggagagccag	gaccaaagg	aggaatcggg	aacccggggc	ctcgtgggga	gacgggagat	7140
gaggggagag	acggagttgg	cagtgaagga	cgcagaggca	aaaaaggaga	aagaggattt	7200
cctggatacc	caggaccaaa	gggtaaccca	ggtgaacctg	ggctaaatgg	aacaacagga	7260
cccaaaggca	tcagaggccg	aaggggaaat	tcgggacctc	cagggatagt	tggacagaag	7320
gggagacctg	gctaccaggg	accagctggg	caaaggggca	acaggggcga	ctccatcgat	7380

caatgtgccc	tcataccaaag	catcaaagat	aaatgccctt	gctgttacgg	gccccctggag	7440
tgccccgtct	tcccaacaga	actagccttt	gcttttagaca	cctctgaggg	agtcaaccaa	7500
gacactttcg	gccgatgcg	agatgtggtc	ttgagtattg	tgaatgtcct	gaccattgct	7560
gagagcaact	gcccgcgagg	ggcccgggtg	gctgtgggtc	cctacaacaa	cgaggtgacc	7620
acggagatcc	ggtttgctga	ctccaagagg	aagtgcggtcc	tcctggacaa	gattaagaac	7680
cttcagggtg	ctctgacatc	caaacagcag	agtctggaga	ctgccatgtc	gtttgtggcc	7740
aggaacacat	ttaagcgtgt	gaggaacgga	ttcctaata	ggaaagtggc	tgttttcttc	7800
agcaacacac	ccacaagagc	atccccacag	ctcagagagg	ctgtgctcaa	actctcagat	7860
gcggggatca	cccccttggt	ccttacaagg	caggaagacc	ggcagctcat	caacgctttg	7920
cagatcaata	acacagcagt	ggggcatgcg	cctgtcctgc	ctgcagggag	agacctcaca	7980
gacttccttg	agaatgtcct	cacgtgtcat	gtttgtcttg	acatctgcaa	catcgaccca	8040
tcctgtggat	ttggcagttg	gaggccttcc	ttcagggaca	ggagagcggc	agggagtgat	8100
gtggacatcg	acatggcttt	catcttagac	agcgtgaga	ccaccacct	gttccagttc	8160
aatgagatga	agaagtacat	agcgtacctg	gtcagacaac	tggacatgag	cccagatccc	8220
aaggcctccc	agcacttcgc	cagagtggca	gttgtgcagc	acgcgccctc	tgagtccgtg	8280
gacaatgcca	gcatgccacc	tgtgaagggtg	gaattctccc	tgactgacta	tggtcccaag	8340
gagaagctgg	tggaacttct	cagcagggga	atgacacagt	tgacaggaac	cagggcctta	8400
ggcagtgcca	ttgaatacac	catagagaat	gtctttgaaa	gtgccccaaa	cccacgggac	8460
ctgaaaattg	tggtcctgat	gctgacgggc	gaggtgcgag	agcagcagct	ggaggaggcc	8520
cagagagtca	tcctgcaggc	caaatagcaag	ggctacttct	tcgtggctct	gggcattggc	8580
aggaaggtga	acatcaagga	ggtatacacc	ttcgccagtg	agccaaacga	cgtcttcttc	8640
aaattagtgg	acaagtccac	cgagctcaac	gaggagcctt	tgatgcgctt	cgggaggctg	8700
ttgccgtcct	tcgtcagcag	tgaaaatgct	ttttacttgt	ccccagatat	caggaaacag	8760
tgtgattggg	tccaagggga	ccaaccacaca	aagaaccttg	tgaagtgttg	tcacaaacaa	8820
gtaaatgttc	cgaataacgt	tacttcaagt	cctacatcca	accagtgac	gacaacgaag	8880
ccggtgacta	cgacgaagcc	ggtgaccacc	acaacaaagc	ctgtaaccac	cacaacaaag	8940
cctgtgacta	ttataaatca	gccatctgtg	aagccagccg	ctgcaaagcc	ggccccctgc	9000
aaacctgtgg	ctgccaaagc	tgtggccaca	aagacggcca	ctgttagacc	cccagtggcg	9060
gtgaagccag	caacagcagc	gaagcctgta	gcagcaaagc	cagcagctgt	aagaccccc	9120
gctgtgctg	caaaaccagt	ggcgaccaag	cctgaggtcc	ctaggccaca	ggcagccaaa	9180
ccagctgcca	ccaagccagc	caccactaag	cccgtggtta	agatgtctcg	tgaagtccag	9240
gtgtttgaga	taacagagaa	cagcgccaaa	ctccactggg	agaggcctga	gccccccggt	9300
ccttattttt	atgacctcac	cgtaacctca	gccccatgat	agtccttggg	tctgaagcag	9360
aacctcacgg	tcacggaccg	cgtaattgga	ggcctgctcg	ctgggcagac	ataccatgtg	9420
gctgtggtct	gctacctgag	gtctcaggtc	agagccacct	accacggaag	tttcagtaca	9480
aagaaatctc	agccccacc	tccacagcca	gcaaggtcag	cttctagttc	aaccatcaat	9540
ctaattggtga	gcacagaacc	attggctctc	actgaaacag	atatatgcaa	gttgccgaaa	9600
gacgaaggaa	cttgcaggga	tttcatatta	aaatggtact	atgatccaaa	caccaaagc	9660
tgtgcaagat	tctggtatgg	aggttgtggg	ggaaacgaaa	acaaattttg	atcacagaaa	9720
gaatgtgaaa	aggtttgcgc	tcctgtgctc	gccaaaccgc	gagtcatcag	tgtgatggga	9780
acctaagcgt	gggtggccaa	catcatatac	ctcttgaaga	agaaggagtc	agccatcgcc	9840
aacttgtctc	tgtagaagct	ccgggtgtag	attcccttgc	actgtatcat	ttcatgcttt	9900
gatttacact	cgaactcggg	agggaacatc	ctgctgcatg	acctatcagt	atggtgctaa	9960
tgtgtctgtg	gaccctcgct	ctctgtctcc	agcagttctc	tcgaataactt	tgaatgttgt	10020
gtaacagtta	gccactgctg	gtgtttatgt	gaacattcct	atcaatccaa	attccctctg	10080
gagtttcatg	ttatgcctgt	tgcaggcaaa	tgtaaagtct	agaaaataat	gcaaagtgtca	10140
cggctactct	atatactttt	gcttggttca	ttttttttcc	cttttagtta	agcatgactt	10200
tagatgggaa	gcctgtgtat	cgtggagaaa	caagagacca	actttttcat	tccttgcccc	10260
caatttccca	gactagattt	caagctaatt	ttctttttct	gaagcctcta	acaaatgatc	10320
tagttcagaa	ggaagcaaaa	tcccttaatt	tatgtgcacc	gttgggacca	atgccttaat	10380
taaagaattt	aaaaaagttg	taatagagaa	tatttttggc	attcctctca	atgttgtgtg	10440
tttttttttt	ttgtgtgctg	gagggagggg	atttaatttt	aatttttaaaa	tgtttaggaa	10500
atttatacaa	agaaactttt	taataaagta	tattgaaagt	ttaaaaaaa	aaaaaaaa	10558

<210> 96

<211> 2252

<212> DNA

<213> Homo sapiens

<220>

<223> alpha-1 collagen type I; alpha-1 type I collagen;
collagen alpha-1 (I) chain precursor; collagen I,
alpha-1 preproprotein; prepro-alpha1(I) collagen
(COL1A1)

<400> 96

```
aattcggtt cgacgttggc cctgtctgct tcctgtaaac tccctccatc ccaacctggc 60
tccctccac ccaaccaact ttcccccaa cccggaaaca gacaagcaac ccaaactgaa 120
ccccccaaa agccaaaaaa tgggagacaa ttccacatgg actttggaaa atattttttt 180
cctttgcatt catctctcaa acttagtttt tatctttgac caaccgaaca tgaccaaaaa 240
ccaaaagtgc attcaacctt accaaaaaaa aaaaaaaaaa aaaaagaata aataaataag 300
tttttaaaaa aggaagcttg gtccacttgc ttgaagaccc atgcgggggt aagtcctttt 360
ctgcccgttg ggttatgaaa cccaatgct gccctttctg ctcttttctc cacaccccc 420
ttggcctccc ctccactcct tcccaaatct gtctccccag aagacacagg aaacaatgta 480
ttgtctgccc agcaatcaaa ggcaatgctc aaacacccaa gtggcccca ccctcagccc 540
gctcctgccc gcccagcacc ccagggcctt ggggacctgg ggttctcaga ctgccaaaga 600
agccttgcca tctggcgctc ccattggctt tgcaacatct ccccttcgtt tttgaggggg 660
tcatgccggg ggagccacca gccctcact ggggttcggg gagagtcagg aagggccacg 720
acaaagcaga aacatcggtt ttggggaacg cgtgtcatcc ctgtgcccgc aggcctggcg 780
ggagagactg ttctgttctg ttcttgtgt aactgtgttg ctgaaagact acctcgttct 840
tgtcttgatg tgtcaccggg gcaactgcct gggggcgggg atgggggcag ggtggaagcg 900
gctccccatt tttataccaa aggtgctaca tctatgtgat ggggtggggtg gggagggaat 960
cactgggtgct atagaaattg agatgcccc ccaggccagc aaatgttcct tttgttcaa 1020
agtctatttt tattccttga tattttttct ttcttttttt tttttttgt ggatggggac 1080
ttgtgaattt ttctaaaggt gctatttaac atgggaggag agcgtgtgcg ctccagccca 1140
gccgctgct cactttccac cctctctcca cctgcctctg gcttctcagg cctctgctct 1200
ccgacctctc tcctctgaaa ccctcctcca cagctgcagc ccattcctcc ggctccctcc 1260
tagtctgtcc tgcgtcctct gtccccgggt ttcagagaca acttcccaaa gcacaaagca 1320
gtttttccct aggggtggga ggaagcaaaa gactctgtac ctattttgta tgtgtataat 1380
aatttgagat gtttttaatt attttgattg ctggaataaa gcatgtggaa atgacccaaa 1440
cataatccgc agtggcctcc taatttcctt ctttgaggtt gggggagggg tagacatggg 1500
gaaggggcct tgggggtgatg ggcttgctt ccattcctgc ctttccctc cccactattc 1560
tcttctagat cctccataa ccccaactcc ctttctctca cccttcttat accgcaaacc 1620
tttctacttc ctctttcatt ttctattctt gcaatttcct tgcacctttt ccaaactctc 1680
ttctcccctg caataccata caggcaatcc acgtgcacaa cacacacaca cactcttcac 1740
atctgggggt gtccaaacct cataccact ccccttcaag cccatccact ctccaccccc 1800
tggtgcccct gcacttggtg gcggtgggat gctcatggat actgggaggg tgaggggagt 1860
ggaacccgtg aggaggacct gggggcctct ccttgaactg acatgaaggg tcatctggcc 1920
tctgctccct tctcaccac gctgacctcc tgccgaagga gcaacgcaac aggagagggg 1980
tctgctgagc ctggcgaggg tctgggaggg accaggagga aggcgtgctc cctgctcgct 2040
gtcctggccc tgggggagtg agggagacag acacctggga gagctgtggg gaaggcactc 2100
gcaccgtgct cttgggaagg aaggagacct ggccctgctc accacggact ggggtgcctcg 2160
acctcctgaa tcccagaac acaaccccc tgggctgggg tggctctgggg aaccatcggt 2220
ccccgcctc ccgcctactc ctttttaagc tt 2252
```

<210> 97

<211> 2520

<212> DNA

<213> Homo sapiens

<220>

<223> collagen, type III, alpha 1 preproprotein;
collagen alpha 1 type III; pro-alpha1(III)
collagen (COL3A1); Ehlers-Danios syndrome type IV;
fetal collagen

<220>

<221> modified_base

<222> (2509)

<223> n = g, a, c or t

<400> 97

```
gctgggatca ctggagcacg ggggtcttgca ggaccaccag gcatgccagg tcctagggga 60
agccctggcc ctgagggtgt caaggggtgaa agtgggaaac caggagctaa cgggtctcagt 120
ggagaacgtg gtccccctgg accccagggt cttcctgggtc tggctggtac agctgggtgaa 180
cctggaagag atggaaaacc tggatcatat ggtcttccag gccgagatgg atctcctggt 240
ggcaaggggtg atcgtggtga aaatggctct cctgggtgccc ctggcgctcc tggtcatcca 300
ggccccactg gtcctgtcgg tccagctgga aagagtgggtg acagaggaga aagtggccct 360
gctggccctg ctggtgctcc cggctctgct ggttcccag gtgctcctgg tcctcaaggc 420
ccacgtggtg acaaaggtga aacaggtgaa cgtggagctg ctggcatcaa aggacatcga 480
ggattccctg gtaatccagg tgccccaggt tctccagggc ctgctggtca gcagggtgca 540
atcggcagtc caggacctgc agggcccaga ggacctgttg gacccagtgg acctcctggc 600
aaagatggaa ccagtggaca tccaggtccc attggaccac cagggcctcg aggtaacaga 660
ggtgaaagag gatctgaggg ctccccaggc caccagggc aaccaggccc tcctggacct 720
cctgggtgccc ctgggtcctg ctgtggtggt tatggagccg ctgccattgc tgggattgga 780
ggtgaaaaag ctggcggttt tgccccctat tatggagatg aaccaatgga tttcaaaatc 840
aacaccgatg agattatgac ttactcaag tctgctaata gacaaataga aagcctcatt 900
agtctgatg gttctcgtaa aaaccccgct agaaactgca gagacctgaa attctgccat 960
cctgaactca agagtggaga atactgggtt gaccctaacc aaggatgcaa attggatgct 1020
atcaaggtat tctgtaatat ggaaactggg gaaacatgca taagtgccaa tcctttgaat 1080
gttccacgga aacactgggtg gacagattct agtgctgaga agaaacacgt ttggtttgga 1140
gagtccatgg atggtggttt tcagtttagc tacggcaatc ctgaacttcc tgaagatgtc 1200
cttgatgtgc agctggcatt ccttcgactt ctctccagcc gagcttccca gaacatcaca 1260
tatcactgca aaaatagcat tgcatacatg gtcaggcca gtggaaatgt aaagaaggcc 1320
ctgaagctga tggggtcaaa tgaaggtgaa tatcaaggctg aaggaaatag caaattcacc 1380
tacacagttc tggaggatgg ttgcacgaaa cacactgggg aatggagcaa aacagtcttt 1440
gaatatcgaa cagcaaggc tgtgagacta cctattgtag atattgcacc ctatgacatt 1500
ggtggtcctg atcaagaatt tgggtgtggac gttggccctg tttgcttttt ataaaccaa 1560
ctctatctga aatcccaaca aaaaaattt aactccatat gtgttctct tgttctaate 1620
ttgtcaacag tgcaaggtgg accgacaaaa ttccagttat tatttccaaa tgtttggaaa 1680
cagtataatt tgacaaagaa aaatgatagt tccctttttt gctgttccac caataacaat 1740
tcaatgcttt ttgttttatt tttttacca ttccaatttc aaaatgtctc aatggtgcta 1800
taataaataa acttcaacac tctttatgat aacaacactg tgttatattc tttgaatcct 1860
agcccatctg cagagcaatg actgtgctca ccagtaaaag ataacctttc tttctgaaat 1920
agtcaaatac gaaattagaa aagccctccc tattttaact acctcaactg gtcagaaaca 1980
cagattgtat tctatgagtc ccagaagatg aaaaaattt tatacgttga taaaacttat 2040
aaatttcatg attaatctcc tgggaagattg gtttaaaaga aagtgtaatg caagaattaa 2100
agaaatattt ttaaagccac aattatttta atattggata tcaactgctt gtaaagggtgc 2160
tcctcttttt tcttgtcatt gctggtcaag attactaata tttgggaagg ctttaaagac 2220
gcatgttatg gtgctaattg actttcactt ttaaactcta gatcagaatt gttgacttgc 2280
attcagaaca taaatgcaca aaatctgtac atgtctccca tcagaaagat tcaccggcat 2340
gccacagggg attctcctcc ttcactctgt aaaggtcaac aataaaaacc aaattatggg 2400
gctgcttttg tcacactagc ataggagaat gtgttgaaat ttaactttgt aagctgtat 2460
gtggttggtg atcttttttt tccttacaga caaccataat aaaatatana ttaaaattca 2520
```

<210> 98

<211> 1585

<212> DNA

<213> Homo sapiens

<220>

<223> collagen alpha-2(VI) chain precursor; collagen VI
alpha-2; alpha-2 type VI collagen; type VI
collagen alpha 2 chain precursor (COL6A2)

<400> 98

```
gagtgtgacg tcatgaccta cgtgaggagg acctgcgggt gctgcgactg tgagaagcgc 60
tgtggcgccc tggacgtggt cttcgtcctc gagactccc agagcattgg gtacaccaac 120
ttcacactgg agaagaactt cgtcatcaac gtgggtcaaca ggctgggtgc catcgctaag 180
gaccccaagt ccgagacagg gacgcgtgtg ggcgtggtgc agtacagcca cgagggcacc 240
tttgaggcca tccagctgga cgacgaacat atcgactccc tgtcgagctt caaggaggct 300
```


gtcaagaacc	tcgagtggat	tgcgggcggc	acctggacac	cctcagccct	caagtttgcc	360
tacgaccgcc	tcatcaagga	gagccggcgc	cagaagacac	gtgtgtttgc	ggtggtcatc	420
acggacgggc	gccacgaccc	tcgggacgat	gacctcaact	tgcgggcgct	gtgcatcgcc	480
gacgtcacag	tgacggccat	cggcatcggg	gacatgttcc	acgagaagca	cgagagtga	540
aacctctact	ccatcgccctg	cgacaagcca	cagcaggtgc	gcaacatgac	gctgttctcc	600
gacctggtcg	ctgagaagtt	catcgatgac	atggaggacg	tcctctgccc	ggaccctcag	660
atcgtgtgcc	cagaccttcc	ctgccaaaca	gagctgtccg	tggcacagtg	cacgcagcgg	720
cccgtggaca	tcgtcttcct	gctggacggc	tccgagcggc	tgggtgagca	gaacttccac	780
aaggcccggc	gcttcgtgga	gcaggtggcg	cggcggtga	cgctggccc	gagggacgac	840
gacctctca	acgcacgcgt	ggcgctgctg	cagtttggtg	gccccggcga	gcagcaggtg	900
gccttccccg	tgagccacaa	cctcactgcc	atccacgagg	cgctggagac	cacacaatac	960
ctgaactcct	tctcgacgt	ggcgcgaggc	gtggtgcacg	ccatcaatgc	catcgtgcgc	1020
agcccgctg	gcggggcccg	gagggacgca	gagctgtcct	tcgtgttctc	cacggacggc	1080
gtcacgggca	acgacagctc	gcacgagtcg	gcgcactcca	tgcgcaacga	gaacgtggta	1140
cccaccgtcc	tggccttggtg	cagcgacgtg	gacatggacg	tgctcaccac	gctcagcctg	1200
ggtgaccgcg	ccgcccgtgtt	ccacgagaag	gactatgaca	gcctggcgca	accggcttc	1260
ttcgaccgct	tcatccgctg	gatctgctag	cgcgcgccgc	cgggccccgc	agtcgagggg	1320
cgtgagccca	ccccgtccat	ggtgctaagc	gggcccgggt	cccacacggc	cagcaccgct	1380
gctcactcgg	acgacgccct	gggcctgcac	ctctccagct	cctcccacgg	ggtccccgta	1440
gccccggccc	ccgcccagcc	ccaggtctcc	ccaggccctc	cgcaggctgc	ccggcctccc	1500
tccccctgca	gccatcccaa	ggctcctgac	ctacctggcc	cctgagctct	ggagcaagcc	1560
ctgaccaaat	aaaggctttg	aaccc				1585

<210> 99

<211> 2212

<212> DNA

<213> Homo sapiens

<220>

<223> collagen alpha-2(IV) chain precursor; alpha-2 type
IV collagen; type IV collagen alpha (2) chain;
(COL4A2); procollagen; basement membrane collagen

<400> 99

ggggaacgag	gcccacctgg	gagcccagga	cttcaggggt	tcccaggcat	cacaccccct	60
tccaacatct	ctggggcacc	tggtgacaaa	ggggcgccag	ggatatttgg	cctgaaaggt	120
tatcggggcc	caccagggcc	accaggttct	gctgctcttc	ctggaagcaa	aggtgacaca	180
gggaaccag	gagctccagg	aaccccaggg	accaaaggat	gggcccggga	ctccggggcc	240
cagggcaggc	ctggtgtgtt	tggtctccca	ggagaaaaag	ggcccagggg	tgaacaaggc	300
ttcatgggga	acactggacc	caccggggcg	gtgggcgaca	gaggcccaa	gggaccaag	360
ggagaccag	gattccctgg	tgccccggcg	actgtgggag	cccccgggat	tgcaggaatc	420
ccccagaaga	ttgccatcca	accaggggaca	gtgggtcccc	aggggaggcg	aggccccctc	480
ggggcaccgg	gggagatcgg	gccccagggc	ccccccggag	aaccaggttt	tcgtggggct	540
ccagggaag	ctggggccca	aggaagaggt	ggtgtgtctg	ctgttcccg	cttccgggga	600
gatgaaggac	ccataggcca	ccaggggccg	attggccaag	aaggtgcacc	aggccgtcca	660
gggagcccgg	gcctgccggg	tatgccaggc	cgcagcgtca	gcacgggcta	cctcctggtg	720
aagcacagcc	agacggacca	ggagcccatg	tgcccgggtg	gcatgaacaa	actctggagt	780
ggatacagcc	tgctgtactt	cgaggggccag	gagaaggcgc	acaaccagga	cctggggctg	840
gcgggctcct	gcctggcgcg	gttcagcacc	atgcccttcc	tgtactgcaa	ccctgggtgat	900
gtctgtact	atgccagccg	gaacgacaag	tcctactggc	tctctaccac	tgcgccgctg	960
cccatgatgc	ccgtggccga	ggacgagatc	aagccctaca	tcagccgctg	ttctgtgtgt	1020
gaggccccgg	ccatcgccat	cgcggtccac	agtcaggatg	tctccatccc	acactgcccc	1080
gctgggtggc	ggagtgtgtg	gatcggatat	tccttcctca	tgcacacggc	ggcgggagac	1140
gaaggcggtg	gccaatcact	ggtgtcaccg	ggcagctgtc	tagaggactt	ccgcgccaca	1200
ccattcatcg	aatgcaatgg	aggccgcggc	acctgccact	actacgcaa	caagtacagc	1260
ttctggctga	ccaccattcc	cgagcagagc	ttccagggct	cgccctccgc	cgacacgctc	1320
aaggccggcc	tcatccgcac	acacatcagc	cgtgccagg	tgtgcatgaa	gaacctgtga	1380
gccggcgcg	gccaggaag	gccatttttg	tgcttattct	taacttatta	cctcaggtgc	1440
caacaaaaaa	ttggttttat	ttttttctta	aaaaaaaaaa	aaagtctacc	aaaggaattt	1500
gcatccagca	gcagcactta	gacctgccag	ccactgtcac	cgaagggtg	caagcactcg	1560
gggtccctgg	aggcaagccc	tgcccacaga	aagccaggag	cagccctggc	ccccatcagc	1620

cctgctacga	cgacaccgct	gaaggcacag	ctaaccactt	cgcacacacc	catgtaacca	1680
ctgcactttc	caatgccaca	gacaactcac	attgttcaac	tccttctcgg	ggtgggacag	1740
acgagacaac	agcacacagg	cagccagccg	tggccagagg	ctcgaggggc	tcaggggctc	1800
aggcaccggt	ccccacacga	gggccccgtg	ggtggcctgg	ccctgctttc	tacgccaatg	1860
ttatgccagc	tccatgttct	cccaaatacc	gttgatgtga	attattttaa	aggcaaaact	1920
gtgctcttta	ttttaaaaaa	cactgataat	cacactgcgg	taggtcattc	ttttgccaca	1980
tccctataga	ccactgggtt	tggcaaaact	caggcagaag	tggagacctt	tctagacatc	2040
attgtcagcc	ttgctacttg	aaggtaacac	ccataggggc	ggaggtgctg	tccccactgc	2100
cccaccttgt	ccctgagatt	taacccctcc	actgctgggg	gtgagctgta	ctcttctgac	2160
tgccccctcc	tgtgtaacga	ctacaaaata	aaacttgggt	ctgaatatatt	tt	2212

<210> 100

<211> 1830

<212> DNA

<213> Homo sapiens

<220>

<223> mucin 4; tracheo-bronchial mucin (MUC4)

<400> 100

acttcctcag	tatccacagg	ccacgccacc	tctcttctctg	tcaccgacac	ttcctcagca	60
tccacaagtc	acgccacctc	tcttctctgtc	actgacactt	cctcagcatc	cacaagtcac	120
gccacctctc	ttcttgtcac	cgacgcttcc	tcagtatcca	caggtgacac	cacccctctt	180
cctgtcaccg	acacttcctc	agcatccaca	ggtgacacca	ccctcttcca	tgtcaccgac	240
gcttcctcag	tatccacagg	tcacgccacc	cctcttcatg	tcaccagcct	ttcctcagta	300
tccacagggtg	acaccacgcc	tcttctctgtc	actagccctt	cctcagcatc	ctcaggtcac	360
gccacctctc	ttcctgtcac	cgacgcttcc	tcactctcca	caggtcacgc	cacctctctt	420
catgtcaccg	acgcttcctc	agtatccaca	ggtcacgcca	cccttcttcca	tgtcaccgac	480
gcttcctcag	catccacagg	ccacaccacc	tctcttctctg	tcaccgacgc	ttcctcagta	540
tccacagggtg	acaccacccc	tcttctctgtc	accgacactt	cctcagcatc	cacagggtgac	600
accacccctc	ttcatgtcac	cgacgcttcc	tcagtatcca	caggtcacgc	cacccctctt	660
catgtcacca	gcctttcctc	agtatccaca	ggtgacacca	cgctcttcc	tgtcactagc	720
ccttcctcag	catcctcagg	tcacgccacc	tctcttctctg	tcaccgacgc	ttcctcagtg	780
tccacagggtc	acgccacctc	tcttctctgtc	accatccctt	cctcagcatc	ctctgggtgac	840
gccacctctc	ttcctgtcac	cagccttctc	tcactctcca	caggtcacgc	cacccctctt	900
cctgtcacca	gcctttcctc	agcatccaca	ggtcacgcca	ccctcttcc	tgtcaccgac	960
acttcctcag	tatctacagg	tcacgccacc	tctcttcttg	tcaccgacgc	ttcctcagta	1020
tccacagggtc	acgccacccc	tcttcatgtc	accgatgctt	cctcagtatc	cacagggtgac	1080
accacccctc	ttcctgtcac	cagcccttcc	tcagcatcca	caggtgacac	cacccctctt	1140
cctgtcacccg	acacttcctc	agtatccaca	ggcgacacca	ccctcttct	tgtcaccgac	1200
acttcctcag	tatccacaag	ccacgccacc	tctcttctctg	tcaccgacac	ttcctcagta	1260
tccacaagcc	acgccacctc	tcttctctgtc	accgaccctt	cctcagcatc	cacagggtgac	1320
accacccctc	ttcctgtcac	cgacacttcc	tcagtatcca	caagccacgc	cacctctctt	1380
cctgtcacccg	acacttcctc	agcatccaca	agtcacgcca	cctctcttcc	tgtcactgac	1440
acttcctcag	catccacagg	tcacgccacc	cctcttctctg	tcaccgacac	ttcctcagca	1500
tccacagggtc	acgccacccc	tcttcttctg	accgacactt	cctcagcatc	cacagggtcac	1560
accacccctc	ttcatgtcac	cagcccttcc	tcagcatcca	caggtcacgc	cacccctctt	1620
cctgtcacca	gcccttctc	agcatccaca	agtcacgcca	cctctcttcc	tgtcaccgac	1680
acttcctcag	catccacagg	tcacgccacc	cctcttcttg	tcaccgacac	ttcctcagca	1740
tccacagggtc	acgccacccc	tcttcttctg	accgacactt	cctcagcatc	cacagggtcac	1800
gccacccctc	ttcctgtcac	cgacacttcc				1830

<210> 101

<211> 490

<212> DNA

<213> Homo sapiens

<220>

<223> trefoil factor 1 (TFF1) precursor; gastrointestinal trefoil protein pS2; pS2 protein precursor; protein NR-2/pS2; estrogen-regulated protein pNR-2; breast cancer estrogen inducible sequence (BCE1, BCE I); HPl.A

<400> 101

```
atccctgact cggggtcgcc tttggagcag agaggaggca atggccacca tggagaacaa 60
ggtgatctgc gccctggtcc tgggtgtccat gctggccctc ggcaccctgg ccgaggccca 120
gacagagacg tgtacagtgg cccccctga aagacagaat tgtggttttc ctggtgtcac 180
gccctcccag tgtgcaaata agggctgctg tttcgacgac accgttcgtg gggccccctg 240
gtgctttctat cctaatacca tcgacgtccc tccagaagag gagtgtgaat tttagacact 300
tctgcaggga tctgcctgca tcttgacgcg gtgccgtccc cagcacgggtg attagtccca 360
gagctcggct gccacctcca ccggacacct cagacacgct tctgcagctg tgcctcgggt 420
cacaacacag attgactgct ctgactttga ctactcaaaa ttggcctaaa aattaaaaga 480
gatcgaattt                                     490
```

<210> 102

<211> 229

<212> DNA

<213> Homo sapiens

<220>

<223> intestinal mucin

<400> 102

```
ctgcacccaa acagacacat caacgcaccc cactcacaga cacccttac cccaccccca 60
ctgtgcagag accaaccatg acacccatca ccaccaccac cacggtgacc ccaaccccaa 120
caccaccggg cacacagacc ccaacaacga caccatcag caccaccacc acggtgaccc 180
caaccccaac acccaccggc acacagaccc caagatcgac acccatcac          229
```

<210> 103

<211> 2133

<212> DNA

<213> Homo sapiens

<220>

<223> osteonectin precursor; secreted protein, acidic, cysteine rich (SPARC); basement-membrane protein 40 (BM-40); extracellular matrix protein BM-40

<400> 103

```
cgggagagcg cgctctgcct gccgcctgcc tgcctgccac tgagggttcc cagcaccatg 60
agggcctgga tcttctttct cctttgcctg gccgggaggg ccttggcagc ccctcagcaa 120
gaagccctgc ctgatgagac agaggtggtg gaagaaactg tggcagaggt gactgaggta 180
tctgtgggag ctaatcctgt ccaggtggaa gtaggagaat ttgatgatgg tgcagaggaa 240
accgaagagg aggtggtggc ggaaaatccc tgccagaacc accactgcaa acacggcaag 300
gtgtgcgagc tggatgagaa caacaccccc atgtgcgtgt gccaggaccc caccagctgc 360
ccagcccca ttggcgagtt tgagaagggtg tgcagcaatg acaacaagac cttcgactct 420
tcttgccact tctttgccac aaagtgcacc ctggagggca ccaagaaggg ccacaagctc 480
cacctggact acatcggggc ttgcaaatac atccccctt gcctggactc tgagtgcacc 540
gaattcccc tgcgcatgcy ggactggctc aagaacgtcc tggtcaccct gtatgagagg 600
gatgaggaca acaaccttct gactgagaag cagaagctgc gggatgaaga gatccatgag 660
aatgagaagc gcctggaggc aggagaccac cccgtggagc tgctggcccg ggacttcgag 720
aagaactata acatgtacat cttccctgta cactggcagt tcggccagct ggaccagcac 780
cccattgacg ggtacctctc ccacaccgag ctggctccac tgcgtgctcc cctcatcccc 840
atggagcatt gcaccacccg ctttttcgag acctgtgacc tggacaatga caagtacatc 900
gccctggatg agtgggcccg ctgcttcggc atcaagcaga aggatatcga caaggatctt 960
gtgatctaaa tccactcctt ccacagtacc ggattctctc ttttaaccctc cccttcgtgt 1020
ttcccccaat gtttaaaatg tttggatggt ttgttctct gcctggagac aaggtgctaa 1080
catagattta agtgaataca ttaacggtgc taaaaatgaa aattctaacc caagacatga 1140
```

cattcttagc	tgtaacttaa	ctattaaggc	cttttccaca	cgcattaata	gtcccatttt	1200
tctcttgcca	ttttagctt	tgcccattgt	cttattggca	catgggtgga	cacggatctg	1260
ctgggctctg	ccttaaacac	acattgcagc	ttcaactttt	ctcttttagt	ttctgtttga	1320
aactaatact	taccgagtca	gacttttgtt	tcatttcatt	tcagggtctt	ggctgcctgt	1380
gggcttcccc	aggtggcctg	gaggtgggca	aagggagata	acagacacac	gatgttgtca	1440
aggatggttt	tgggactaga	ggctcagtg	tgggagagat	ccctgcagaa	tccaccaacc	1500
agaacgtggg	ttgcctgagg	ctgtaactga	gagaaagatt	ctggggctgt	cttatgaaaa	1560
tatagacatt	ctcacataag	cccagttcat	caccatttcc	tcctttacct	ttcagtgcag	1620
tttcttttca	cattaggctg	ttggttcaaa	cttttgggag	cacggactgt	cagttctctg	1680
ggaagtgggc	agcgcaccc	gcagggtctc	tcctcctctg	tcttttggag	aaccagggct	1740
cttctcaggg	gctctaggga	ctgccaggct	gtttcagcca	ggaaggccaa	aatcaagagt	1800
gagatgtaga	aagttgtaaa	atagaaaaag	tggagttggg	gaatcggttg	ttctttcctc	1860
acatttggat	gattgtcata	aggtttttag	catgttctct	cttttcttca	ccctcccctt	1920
tgttcttcta	ttaatcaaga	gaaacttcaa	agttaatggg	atggtcggat	ctcacaggct	1980
gagaactcgt	tcacctccaa	gcatttcatg	aaaaagctgc	ttcttattaa	tcatacaaac	2040
tctcaccatg	atgtgaagag	tttcacaaat	ctttcaaaat	aaaaagtaat	gacttagaaa	2100
ctgaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaa			2133

<210> 104

<211> 1182

<212> DNA

<213> Homo sapiens

<220>

<223> proteoglycan 1 (PRG1); hematopoietic proteoglycan core protein;
secretory granule proteoglycan core protein precursor;
serglycin (SRGN) precursor; proteoglycan secretory granule 1;
HL-60 cell proteoglycan peptide core; platelet proteoglycan

<400> 104

gaattccgct	agactaagtt	ggtcattgat	cagaagctac	tcaaatgcag	tccgcttgct	60
ctggctcttg	ccctcatcct	ggttctggaa	tcctcagttc	aagggtatcc	tacgcagaga	120
gccagggtacc	aatgggtgcg	ctgcaatcca	gacagtaatt	ctgcaaactg	ccttgaagaa	180
aaaggaccaa	tgttcgaact	acttccaggt	gaatccaaca	agatcccccg	tctgaggact	240
gacctttttc	caaagacgag	aatccaggac	ttgaatcgta	tcttcccact	ttctgaggac	300
tactctggat	caggcttcgg	ctccggctcc	ggctctggat	caggatctgg	gagtggcttc	360
ctaacggaaa	tggaacagga	ttaccaacta	gtagacgaaa	gtgatgcttt	ccatgacaac	420
cttaggtctc	ttgacaggaa	tctgccctca	gacagccagg	acttgggtca	acatggatta	480
gaagaggatt	ttatgttata	aaagaggatt	ttcccacctt	gacaccagge	aatgtagtta	540
gcataatttta	gtaccatgg	ttatatgatt	aatcttggga	caaagaattt	tatagaaatt	600
tttaaacatc	tgaaaaagaa	gcttaagttt	tatcatcctt	ttttttctca	tgaattctta	660
aaggattatg	ctttaatgct	gttatctatc	ttattgttct	tgaaaatacc	tgcatTTTTT	720
ggtatcatgt	tcaaccaaca	tcattatgaa	attaattaga	ttcccatggc	cataaaatgg	780
ctttaaagaa	tatatatata	tttttaaagt	agcttgagaa	gcaaattggc	aggtaatat	840
tcatacctaa	attaagactc	tgacttggat	tgtgaattat	aatgatatgc	cccttttctt	900
ataaaaaaaa	aaaaaaaaata	atgaaacaca	gtgaatttgt	agagtggggg	tatttgacat	960
attttacagg	gtggagtgtg	ctatatacta	ttacctttga	atgtgtttgc	agagctagt	1020
gatgtgtttg	tctacaagta	tgattgctgt	tacataaacac	cccaaattaa	ctcccaaatt	1080
aaaacacagt	tgtgctgtca	atacctcata	ctgctttacc	tttttttctt	ggatatctgt	1140
gtattttcaa	atgttactat	atattaaagc	agaaatataa	cc		1182

<210> 105

<211> 1806

<212> DNA

<213> Homo sapiens

<220>

<223> peripheral myelin protein 22 (PMP22); growth
arrest-specific 3 (GAS-3); SR13 protein;
PAS-II/SR13/Gas-3

<400> 105

```
aggggaacatc tcgggggagcc tgggttggaa ctgcaggctt agtctgtcgg ctgcgggtct 60
ctgactgccc tgtggggagg gtcttgccctt aacatccctt gcatttggct gcaaagaaat 120
ctgcttggaa gaaggggtta cgctgttttg cggggcagaa actccgctga gcagaacttg 180
ccgccagaat gctcctcctg ttgctgagta tcctcgctct ccacgtcgcg gtgctgggtgc 240
tgctgttctg ctccacgata gtcagccaat ggatcggtgg caatggacac gcaactgata 300
tctggcagaa ctgtagcacc tcttcctcag gaaatgtcca ccaactgttt tcatcatcac 360
caaacgaatg gctgcagtct gtccaggcca ccatgatcct gtcgatcatc ttcagcattc 420
tgtctctgtt cctgtttcttc tgccaactct tcaccctcac caagggggggc aggtttttaca 480
tcaactggaat cttccaaatt cttgctgggc tgtgctgat gagtgctgcg gccatctaca 540
cggtagaggc cccggagtgg catctcaact cggattactc ctacggtttc gcctacatcc 600
tggcctgggt ggccctcccc ctggcccttc tcagcgggtg catctatgtg atcttgccga 660
aacgcgaatg aggcgcccag acggtctgtc tgaggctctg agcgtacata gggaaggagg 720
gaagggaaac cagaaagcag acaaagaaaa aagagctagc ccaaaatccc aaactcaaac 780
caaaccaaac agaaagcagt ggaggtgggg gttgctgttg attgaagatg tatataatat 840
ctccggttta taaaacctat ttataaact ttttacatat atgtacatag tattgtttgc 900
tttttatgtt gaccatcagc ctctgtttga gccttaaaga agtagctaag gaactttaca 960
tggtaacagt ataatacagc tcagtatttt tgttttgggt tttgtttgtt tgttttgggt 1020
taccagaaa taagataact ccatgtcgcc ccttcccttt catctgaaag aagataacct 1080
cctcccagtc cacctcattt agaaaaccaa agtggtgggt gaaaccccaa atgtccaaaa 1140
gccctttttt ggtgggtgac ccagtgcac caacagaaac agccgctgcc cgaacctgtg 1200
tgaagcttta cgcgcacacg gacaaaatgc ccaaactgga gcccttgcaa aaacacggct 1260
tgtggcattg gcatacttgc ccttacaggt ggagtattct cgtcacacat ctaaatgaga 1320
aatcagtgc aacaagtctt tgaaatgggt ctatggattt accattcctt attatcacta 1380
atcatctaaa caactcactg gaaatccaat taacaatttt acaacataag atagaatgga 1440
gacctgaata attctgtgta atataaatgg tttataactg cttttgtacc tagctaggct 1500
gctattatta ctataatgag taaatcataa agccttcac actcccat tttccttacg 1560
gtcggagcat cagaacaagc gtctagactc cttgggaccg tgagttccta gagcttggct 1620
gggtctaggc tgttctgtgc ctccaaggac tgtctggcaa tgacttgtat tggccaccaa 1680
ctgtagatgt atatatgggt cccttctgat gctaagactc cagacctttt gtttttgctt 1740
tgcattttct gattttatac caactgtgtg gactaagatg cattaaaata aacatcagag 1800
taactc
```

<210> 106

<211> 7680

<212> DNA

<213> Homo sapiens

<220>

<223> fibronectin 1 (FN1) preproprotein; fibronectin
(FN) precursor; cold-insoluble globulin (CIG);
migration-stimulating factor

<400> 106

```
gaagagcaag aggcaggctc agcaaatggt tcagccccag tccccgggtg ctgtcagtca 60
aagcaagccc ggttggttat acaatggaaa acactatcag ataaatcaac agtgggagcg 120
gacctaccta ggtaatgtgt tggtttgtac ttgttatgga ggaagccgag gttttaaactg 180
cgaaagtaaa cctgaagctg aagagacttg ctttgacaag tacactggga acacttaccg 240
agtgggtgac acttatgagc gtcctaaaga ctccatgatc tgggactgta cctgcacatc 300
ggctggggcga gggagaataa gctgtacctc cgcaaaccgc tgccatgaag ggggtcagtc 360
ctacaagatt ggtgacacct ggaggagacc acatgagact ggtgggttaca tgttagagtg 420
tgtgtgtctt ggtaatggaa aaggagaatg gacctgcaag cccatagctg agaagtgttt 480
tgatcatgct gctgggactt cctatgtggg cggagaaacg tgggagaagc cctaccaagg 540
ctggatgatg gtagattgta cttgcctggg agaaggcagc ggacgcatca cttgcacttc 600
tagaaataga tgcaacgata aggacacaag gacatcctat agaattggag acacctggag 660
caagaaggat aatcgaggaa acctgtctca gtgcacatgc acaggcaacg gccgaggaga 720
gtggaagtgt gagaggcaca cctctgtgca gaccacatcg agcggatctg gccccttcac 780
cgatgttctg gcagctgttt accaaccgca gcctcaccac cagcctcttc cctatggcca 840
ctgtgtcaca gacagtgggt tgggtactac tgtgggatg cagtgggtga agacacaagg 900
aaataagcaa atgctttgca cgtgcctggg caacggagtc agctgccaag agacagctgt 960
aaccagact tacgggtggca acttaaattg agagccatgt gtcttaccat tcacctacaa 1020
```

tggcaggacg	ttctactcct	gcaccacgga	agggcgacag	gacggacatc	tttgggtgcag	1080
cacaacttcg	aattatgagc	aggaccagaa	atactctttc	tgcacagacc	acactgtttt	1140
gggttcagact	caaggaggaa	attccaatgg	tgccctgtgc	cacttcccc	tcctatacaa	1200
caaccacaat	tacactgatt	gcacttctga	gggcagaaga	gacaacatga	agtgggtgtg	1260
gaccacacag	aactatgatg	ccgaccagaa	gtttgggttc	tgccccatgg	ctgcccacga	1320
ggaaatctgc	acaaccaatg	aaggggtcat	gtaccgcatt	ggagatcagt	gggataagca	1380
gcatgacatg	ggtcacatga	tgaggtgcac	gtgtgttggg	aatggctcgtg	gggaatggac	1440
atgcattgcc	tactcgcaac	ttcgagatca	gtgcattgtt	gatgacatca	cttacaatgt	1500
gaacgacaca	ttccacaagc	gtcatgaaga	ggggcacatg	ctgaactgta	catgtctcgg	1560
tcagggtcgg	ggcaggtgga	agtgtgatcc	cgtcgaccaa	tgccaggatt	cagagactgg	1620
gacgttttat	caaattggag	attcatggga	gaagtatgtg	catggtgtca	gataccagtg	1680
ctactgctat	ggccgtggca	ttggggagtg	gcattgccaa	cctttacaga	cctatccaag	1740
ctcaagtggg	cctgtcgaag	tatttatcac	tgagactccg	agtcagccca	actcccaccc	1800
catccagtgg	aatgcaccac	agccatctca	catttccaag	tacattctca	ggtggagacc	1860
taaaaattct	gtaggccgtt	ggaaggaagc	taccatacca	ggccacttaa	actcctacac	1920
catcaaaggc	ctgaagcctg	gtgtggtata	cgaggggccag	ctcatcagca	tccagcagta	1980
cggccaccaa	gaagtgactc	gctttgactt	caccaccacc	agcaccagca	cacctgtgac	2040
cagcaacacc	gtgacaggag	agacgactcc	cttttctcct	cttgtggcca	cttctgaatc	2100
tgtgaccgaa	atcacagcca	gtagctttgt	ggtctcctgg	gtctcagctt	ccgacaccgt	2160
gtcgggattc	cgggtggaat	atgagctgag	tgaggaggga	gatgagccac	agtacctgga	2220
tcttccaagc	acagccactt	ctgtgaacat	ccctgacctg	cttctctggc	gaaaatacat	2280
tgtaaatgtc	tatcagatat	ctgaggatgg	ggagcagagt	ttgatcctgt	ctacttcaca	2340
aacaacagcg	cctgtgcccc	ctcctgacct	gactgtggac	caagttgatg	acacctcaat	2400
tgttgttcgc	tggagcagac	cccaggctcc	catcacaggg	tacagaatag	tctattcgcc	2460
atcagtagaa	ggtagcagca	cagaactcaa	ccttctcgaa	actgcaaact	ccgtcaccc	2520
cagtgacttg	caacctgggtg	ttcagtataa	catcactatc	tatgctgtgg	aagaaaatca	2580
agaaagtaca	cctgtttgtca	ttcaacaaga	aaccactggc	accccacgct	cagatacagt	2640
gccctctccc	agggacctgc	agttttgtgga	agtgcagac	gtgaagggtca	ccatcatgtg	2700
gacaccgcct	gagagtgcag	tgaccggcta	ccgtgtggat	gtgatccccg	tcaacctgcc	2760
tggcgagcac	gggcagaggc	tgcccatcag	caggaacacc	tttgcagaag	tcaccgggct	2820
gtcccctggg	gtcacctatt	acttcaaaagt	ctttgcagtg	agccatggga	gggagagcaa	2880
gcctctgact	gctcaacaga	caaccaaaact	ggatgctccc	actaacctcc	agttttgtca	2940
tgaaaactgat	tctactgtcc	tgggtgagatg	gactccacct	cgggcccaga	taacacgata	3000
ccgactgacc	gtgggcctta	cccgaagagg	ccagcccagg	cagtacaatg	tgggtccctc	3060
tgtctccaag	taccccttga	ggaatctgca	gcctgcatct	gagtacaccg	tatccctcgt	3120
ggccataaag	ggcaaccaag	agagccccaa	agccactgga	gtctttacca	cactgcagcc	3180
tgggagctct	attccacctt	acaacaccca	ggtgactgag	accaccatcg	tgatcacatg	3240
gacgcctgct	ccaagaattg	gtttttaagct	gggtgtacga	ccaagccagg	gaggagaggc	3300
accacgagaa	gtgacttcag	actcaggaag	catcgttgtg	tccggcttga	ctccaggagt	3360
agaatacgtc	tacaccatcc	aagtccctgag	agatggacag	gaaagagatg	cgccaattgt	3420
aaacaaagtg	gtgacaccat	tgtctccacc	aacaaaactg	catctggagg	caaaccctga	3480
cactggagtg	ctcacagtct	cctgggagag	gagcaccacc	ccagacatta	ctgggttatag	3540
aattaccaca	acccctacaa	acggccagca	gggaaattct	ttggaagaag	tgggtccatgc	3600
tgatcagagc	tcctgcactt	ttgataacct	gagtcccggc	ctggagtaca	atgtcagtgt	3660
ttacactgtc	aaggatgaca	aggaaagtgt	ccctatctct	gataccatca	tcccagctgt	3720
tctctctccc	actgacctgc	gattcaccaa	cattgggtcca	gacaccatgc	gtgtcacctg	3780
ggctccaccc	ccatccattg	atttaaccaa	cttctctggg	cgttactcac	ctgtgaaaaa	3840
tgagggaagat	gttgacagat	tgtcaatttc	tccttcagac	aatgcagtgg	tcttaacaaa	3900
tctctctgct	gttacagaat	atgtagttag	tgttccagct	gtctacgaac	aacatgagag	3960
cacacctctt	agaggaagac	agaaaacagg	tcttgattcc	ccaactggca	ttgacttttc	4020
tgatattact	gccaactctt	ttactgtgca	ctggattgct	cctcgagcca	ccatcactgg	4080
ctacaggatc	cgccatcatc	ccgagcactt	cagtgggaga	cctcgagaag	atcggtgtgc	4140
ccactctcgg	aattccatca	ccctcaccaa	cctcactcca	ggcacagagt	atgtgggtcag	4200
catcgttgct	cttaatggca	gagaggaaa	tcccttattg	attggccaac	aatcaacagt	4260
ttctgatgtt	ccgagggacc	tggaaagtgt	tgctgcgacc	cccaccagcc	tactgatcag	4320
ctgggatgct	cctgctgtca	cagtgaata	ttacaggatc	acttacggag	aaacaggagg	4380
aaatagccct	gtccaggagt	tactgtgccc	tgggagcaag	tctacagcta	ccatcagcgg	4440
ccttaaacct	ggagttgatt	ataccatcac	tgtgttatgt	gtcactggcc	gtggagacag	4500
ccccgcaagc	agcaagccaa	tttccattaa	ttaccgaaca	gaaattgaca	aaccatccca	4560
gatgcaagtg	accgatgttc	aggacaacag	cattagtgtc	aagtggctgc	cttcaagttc	4620
ccctgttact	ggttacagag	taaccaccac	tcccaaaaat	ggaccaggac	caacaaaaac	4680

taaaactgca	ggtccagatc	aaacagaaat	gactattgaa	ggcttgcagc	ccacagtggg	4740
gtatgtggtt	agtgtctatg	ctcagaatcc	aagcggagag	agtcagcctc	tggttcagac	4800
tgcagtaacc	aacattgata	gccctaaagg	actggcattc	actgatgtgg	atgtcgattc	4860
catcaaaatt	gcttgggaaa	gcccacaggg	gcaagtttcc	aggtacaggg	tgacctactc	4920
gagccctgag	gatggaatcc	atgagctatt	ccctgcacct	gatggtgaag	aagacactgc	4980
agagctgcaa	ggcctcagac	cgggttctga	gtacacagtc	agtgtggttg	ccttgcacga	5040
tgatatggag	agccagcccc	tgattggaac	ccagtccaca	gctattcctg	caccaactga	5100
cctgaagttc	actcaggtca	caccacacaag	cctgagcgcc	cagtggacac	cacccaatgt	5160
tcagctcact	ggatatcgag	tgcggggtgac	ccccaaaggag	aagaccggac	caatgaaaga	5220
aatcaacctt	gctcctgaca	gctcatccgt	ggttgtatca	ggacttatgg	tggtccacca	5280
atatgaagtg	agtgtctatg	ctcttaagga	cacttttgaca	agcagaccag	ctcaggggtg	5340
tgtcaccact	ctggagaatg	tcagcccacc	aagaagggct	cgtgtgacag	atgctactga	5400
gaccaccatc	accattagct	ggagaaccaa	gactgagacg	atcactggct	tccaagttga	5460
tgccgttcca	gccaatggcc	agactccaat	ccagagaacc	atcaagccag	atgtcagaag	5520
ctacaccatc	acagggtttac	aaccaggcac	tgactacaag	atctacctgt	acaccttgaa	5580
tgacaatgct	cggagctccc	ctgtggtcat	cgaagcctcc	actgccattg	atgcaccatc	5640
caacctgcgt	ttcctggcca	ccacacccaa	ttccttgcgt	gtatcatggc	agccgccacg	5700
tgccaggatt	accggctaca	tcatcaagta	tgagaagcct	gggtctcctc	ccagagaagt	5760
ggtccctcgg	ccccgccctg	gtgtcacaga	ggctactatt	actggcctgg	aaccgggaac	5820
cgaatataca	atztatgtca	ttgccctgaa	gaataatcag	aagagcgagc	ccctgattgg	5880
aaggaaaaag	acagacgagc	ttccccaact	ggtaaccctt	ccacacccca	atcttcatgg	5940
accagagatc	ttggatgttc	cttccacagt	tcaaaagacc	cctttcgtca	cccaccttgg	6000
gtatgacact	ggaaatggta	ttcagcttcc	tggcacttct	ggtcagcaac	ccagtgttgg	6060
gcaacaaatg	atctttgagg	aacatggttt	taggcggacc	acaccgccca	caacggccac	6120
ccccataagg	cataggccaa	gaccataccc	gccgaatgta	ggacaagaag	ctctctctca	6180
gacaaccatc	tcatgggccc	cattccagga	cacttctgag	tacatcattt	catgtcatcc	6240
tgttggcact	gatgaagaac	ccttacagtt	cagggttctt	ggaacttcta	ccagtgccac	6300
tctgacaggc	ctcaccagag	gtgccaccta	caacatcata	gtggaggcac	tgaaagacca	6360
gcagaggcat	aagggttcggg	aagaggttgt	taccgtgggc	aactctgtca	acgaaggctt	6420
gaaccaacct	acgatgact	cgtgctttga	cccctacaca	gtttccattt	atgccgttgg	6480
agatgagtgg	gaacgaatgt	ctgaatcagg	ctttaaactg	ttgtgccagt	gcttaggctt	6540
tggaagtggg	catttcagat	gtgattcatc	tagatgggtc	catgacaatg	gtgtgaacta	6600
caagattgga	gagaagtggg	accgtcaggg	agaaaatggc	cagatgatga	gctgcacatg	6660
tcttggaac	ggaaaaggag	aattcaagtg	tgacctcat	gaggcaacgt	gttacgatga	6720
tggaagaca	taccacgtag	gagaacagtg	gcagaaggaa	tatctcgggtg	ccatttgctc	6780
ctgcacatgc	tttgagggcc	agcggggctg	gcgctgtgac	aactgccgca	gacctggggg	6840
tgaacccagt	cccgaaggca	ctactggcca	gtcctacaac	cagtattctc	agagatacca	6900
tcagagaaca	aacactaatg	ttaattgccc	aattgagtgc	ttcatgcctt	tagatgtaca	6960
ggctgacaga	gaagattccc	gagagtaaat	catctttcca	atccagagga	acaagcatgt	7020
ctctctgcc	agatccatct	aaactggagt	gatgttagca	gacctagctt	agagttcttc	7080
tttctttctt	aagccctttg	ctctggagga	agttctccag	cttcagctca	actcacagct	7140
tctccaagca	tcaccttggg	agtttcttga	gggttttctc	ataaatgagg	gctgcacatt	7200
gcctgttctg	cttcgaagta	ttcaataaccg	ctcagtattt	taaatgaagt	gattctaaga	7260
tttggtttgg	gatcaatagg	aaagcatatg	cagccaacca	agatgcaaat	gttttgaaat	7320
gatatgacca	aaatttttaag	taggaaagtc	acccaaacac	ttctgctttc	acttaagtgt	7380
ctggccccgca	atactgtagg	aacaagcatg	atcttgttac	tgtgatattt	taaatatcca	7440
cagtactcac	tttttccaaa	tgatcctagt	aattgcctag	aaatatcttt	ctcttacctg	7500
ttatttatca	atttttccca	gtatttttat	acggaaaaaa	ttgtattgaa	aacacttagt	7560
atgcagttga	taagaggaat	ttggtataat	tatggtgggt	gattattttt	tatactgtat	7620
gtgccaaagc	tttactactg	tgaaagaca	actgttttaa	taaaagattt	acattccaca	7680

<210> 107
 <211> 2691
 <212> DNA
 <213> Homo sapiens

<220>
 <223> transforming growth factor-beta induced protein
 (TGFB1, TGFbetaI) precursor; kerato-epithelin;
 RGD-containing collagen-associated protein
 (RGD-CAP); ig-h3, beta ig.h3

<400> 107

```
gcttgcccggt cggtcgctag ctgcgtcggt ggcgctcgtc ccgctccatg gcgctcttcg 60
tgccggtgct ggctctcgcc ctggctctgg cccctggccc cgcccgacc ctggcgggtc 120
ccgccaagtc gccctaccag ctggtgctgc agcacagcag gctccggggc cgccagcacg 180
gccccaacgt gtgtgctgtg cagaaggtta ttggcactaa taggaagtac ttcaccaact 240
gcaagcagtg gtaccaaagg aaaatctgtg gcaaataaac agtcatcagc tacgagtgtc 300
gtcctggata tgaaaaggtc cctggggaga agggctgtcc agcagcccta ccactctcaa 360
acctttacga gaccctggga gtgcgttgat ccaccaccac tcagctgtac acggaccgca 420
cggagaagct gaggcctgag atggaggggc ccggcagctt caccatcttc gcccttagca 480
acgaggcctg ggccctcctt ccagctgaag tgctggactc cctggtcagc aatgtcaaca 540
ttgagctgct caatgccctc cgctaccata tgggtggcag gcgagtcctg actgatgagc 600
tgaaacacgg catgaccctc acctctatgt accagaattc caacatccag atccaccact 660
atcctaattg gattgtaact gtgaactgtg cccggctcct gaaagccgac caccatgcaa 720
ccaacggggg ggtgcacctc atcgataagg tcactctccac catcaccaac aacatccagc 780
agatcattga gatcgaggac acctttgaga cccttcgggc tgctgtggct gcatagggc 840
tcaacacgat gcttgaagggt aacggccagt acacgctttt ggccccgacc aatgaggcct 900
tcgagaagat ccctagttag actttgaacc gtatcctggg cgacccagaa gccctgagag 960
acctgctgaa caaccacatc ttgaagtcag ctatgtgtgc tgaagccatc gttgcggggc 1020
tgtctgtaga gaccctggag ggcacgacac tggaggtggg ctgcagcggg gacatgtca 1080
ctatcaacgg gaaggcgatc atctccaata aagacatcct agccaccaac ggggtgatcc 1140
actacattga tgagctactc atcccagact cagccaagac actatttgaa ttggctgcag 1200
agtctgatgt gtccacagcc attgaccttt tcagacaagc cggcctcggc aatcatctct 1260
ctggaagtga gcggttgacc ctccctggctc cctgaattc tgtattcaaa gatggaacct 1320
ctccaattga tgccataaca aggaatttgc ttcggaacca cataattaaa gaccagctgg 1380
cctctaagta tctgtaccat ggacagaccc tggaaactct gggcggcaaa aaactgagag 1440
tttttgttta tcgtaatagc ctctgcattg agaacagctg catcgcggcc cacgacaaga 1500
gggggaggta cgggaccctg ttcacgatgg accgggtgct gaccccccca atggggactg 1560
tcatggatgt cctgaaggga gacaatcgct ttagcatgct ggtagctgcc atccagtctg 1620
caggactgac ggagaccctc aaccgggaag gagtctacac agtctttgct cccacaaatg 1680
aagccttccg agccctgcc acaagagaac ggagcagact cttgggagat gccaaggaac 1740
ttgccaacat cctgaaatac cacattggtg atgaaatcct ggtagcgga ggcatcgggg 1800
ccctggtgct gctaaaagtct ctccaagggt acaagctgga agtcagcttg aaaaacaatg 1860
tggtgagtgt caacaaggag cctgttgccg agcctgacat catggccaca aatggcgtgg 1920
tccatgtcat caccaatgtt ctgcagcctc cagccaacag acctcaggaa agaggggatg 1980
aacttgcaga ctctgcgctt gagatcttca aacaagcatc agcgttttcc agggcttccc 2040
agaggtctgt gcgactagcc cctgtctatc aaaagttatt agagaggatg aagcattagc 2100
ttgaagcact acaggaggaa tgcaccacgg cagctctccg ccaatttctc tcagatttcc 2160
acagagactg tttgaatgtt ttcaaaaacca agtatcacac tttaatgtac atgggccgca 2220
ccataatgag atgtgagcct tgtgcatgtg ggggaggagg gagagagatg tactttttaa 2280
atcatgttcc cctaaacat ggctgttaac ccactgcatg cagaaaacttg gatgtcactg 2340
cctgacattc acttccagag aggacctatc ccaaatgtgg aattgactgc ctatgccaa 2400
tccttggaag aggagcttca gtattgtggg gctcataaaa catgaatcaa gcaatccagc 2460
ctcatgggaa gtcctggcac agtttttgta aagcccttgc acagctggag aaatggcatc 2520
attataagct atgagttgaa atgttctgtc aaatgtgtct cacatctaca cgtggcttgg 2580
aggcttttat ggggccctgt ccaggtagaa aagaaatggt atgtagagct tagatttccc 2640
tattgtgaca gagccatggt gtgtttgtaa taataaaacc aaagaaacat a 2691
```

<210> 108

<211> 3213

<212> DNA

<213> Homo sapiens

<220>

<223> osteoblast specific factor 2 (OSF-2, OSF-2os)
precursor; osteoblast specific factor 2
(fasciclin-I-like); periostin (PN, POSTN);
periodontal ligament-specific periostin

<400> 108

```
agagactcaa gatgattccc tttttaccca tgttttctct actattgctg cttattgtta 60
accctataaa cgccaacaat cattatgaca agatcttggc tcatagtcgt atcaggggtc 120
```

gggaccaagg	cccaaagtgc	tgtgcccttc	aacagatttt	gggcaccaa	aagaaatact	180
tcagcacttg	taagaactgg	tataaaaagt	ccatctgtgg	acagaaaacg	actgttttat	240
atgaatggtg	ccctggttat	atgagaatgg	aaggaatgaa	aggctgccc	gcagttttgc	300
ccattgacca	tgtttatggc	actctgggca	tctgtgggagc	caccacaacg	cagcgctatt	360
ctgacgcctc	aaaactgagg	gaggagatcg	agggaaaggg	atccttcact	tactttgcac	420
cgagtaatga	ggcttggggac	aacttggatt	ctgatatccg	tagaggtttg	gagagcaacg	480
tgaatgttga	attactgaat	gctttacata	gtcacatgat	taataagaga	atgttgacca	540
aggacttaaa	aaatggcatg	attattcctt	caatgtataa	caatttgggg	cttttcatta	600
accattatcc	taatgggggt	gtcactgtta	attgtgctcg	aatcatccat	gggaaccaga	660
ttgcaacaaa	tgggtgttgc	catgtcattg	accgtgtgct	tacacaaatt	ggtacctcaa	720
ttcaagactt	cattgaagca	gaagatgacc	tttcatcttt	tagagcagct	gccatcacat	780
cggacatatt	ggaggccctt	ggaagagacg	gtcacttcac	actctttgct	cccaccaatg	840
aggcttttga	gaaacttcca	cgaggtgtcc	tagaaagggt	catgggagac	aaagtggctt	900
ccgaagctct	tatgaagtac	cacatcttaa	atactctcca	gtgttctgag	tctattatgg	960
gaggagcagt	ctttgagacg	ctggaaggaa	atacaattga	gataggatgt	gacggtgaca	1020
gtataacagt	aaatggaatc	aaaatggtga	acaaaaagga	tattgtgaca	aataatggtg	1080
tgatccattt	gattgatcag	gtcctaattc	ctgattctgc	caaacaagtt	attgagctgg	1140
ctggaaaaca	gcaaacacc	ttcacggatc	ttgtggccca	attaggcttg	gcatctgctc	1200
tgaggccaga	tggagaatac	actttgctgg	cacctgtgaa	taatgcattt	tctgatgata	1260
ctctcagcat	ggttcagcgc	ctccttaaat	taattctgca	gaatcacata	ttgaaagtaa	1320
aagttggcct	taatgagctt	tacaacgggc	aaatactgga	aaccatcgga	ggcaaacagc	1380
tcagagtctt	cgtatatcgt	acagctgtct	gcattgaaaa	ttcatgcatg	gagaaagggg	1440
gtaagcaagg	gagaaacggg	gcgattcaca	tattccgcga	gatcatcaag	ccagcagaga	1500
aatccctcca	tgaaaagtta	aaacaagata	agcgctttag	caccttctc	agcctacttg	1560
aagctgcaga	cttgaaagag	ctcctgacac	aacctggaga	ctggacatta	tttgtgccaa	1620
ccaatgatgc	ttttaagggg	atgactagt	aagaaaaaga	aattctgata	cgggacaaaa	1680
atgctcttca	aaacatcatt	ctttatcacc	tgacaccagg	agttttcatt	ggaaaaggat	1740
ttgaacctgg	tgttactaac	attttaaa	ccacacaagg	aagcaaaatc	tttctgaaag	1800
aagtaaatga	tacactttctg	gtgaatgaat	tgaaatcaaa	agaatctgac	atcatgacaa	1860
caaatggtgt	aattcatggt	gtagataaac	tcctctatcc	agcagacaca	cctgttggaa	1920
atgatcaact	gctggaata	cttaataaat	taatcaaata	catccaaatt	aagtttgttc	1980
gtggtagcac	cttcaaagaa	atccccgtga	ctgtctatac	aactaaaatt	ataaccaaa	2040
ttgtggaacc	aaaaattaaa	gtgattgaag	gcagtcttca	gcctattatc	aaaactgaag	2100
gaccacact	acaaaaagtc	aaaattgaag	gtgaacctga	attcagactg	attaaagaag	2160
gtgaaacaat	aactgaagt	atccatggag	agccaattat	taaaaaatac	accaaataca	2220
ttgatggagt	gcctgtggaa	ataactgaaa	aagagacacg	agaagaacga	atcattacag	2280
gtcctgaaat	aaaatacact	aggatttcta	ctggagggtg	agaaacagaa	gaaactctga	2340
agaaattggt	acaagaagag	gtcaccaaag	tcaccaaatt	cattgaagggt	ggtgatggtc	2400
atttatttga	agatgaagaa	attaaaagac	tgcttcaggg	agacacaccc	gtgagggaag	2460
tgcaagccaa	caaaaaagtt	caaggttcta	gaagacgatt	aagggaagggt	cgttctcagt	2520
gaaaatccaa	aaaccagaaa	aaaatgttta	tacaacccta	agtcaataac	ctgaccttag	2580
aaaattgtga	gagccaagtt	gacttcagga	actgaaacat	cagcacaag	aagcaatcat	2640
caaataattc	tgaacacaaa	tttaatat	ttttttctga	atgagaaaaca	tgaggggaaat	2700
tgtggagtta	gcctcctgtg	gtaaaggaat	tgaagaaaat	ataacacctt	acaccttttt	2760
tcactcttgac	attaaaagtt	ctggctaact	ttggaatcca	ttagagaaaa	atccttgtca	2820
ccagattcat	tacaattcaa	atcgaagagt	tgtgaactgt	tatcccattg	aaaagaccga	2880
gccttgatatg	tatgttatgg	atacataaaa	tgacgcgaag	ccattatctc	tccatgggaa	2940
gctaagttaa	aaaaataggt	gcttgggtga	caaaaactttt	tatatcaaaa	ggctttgcac	3000
atctctatat	gagtgggttt	actggtaaat	tatgttattt	tttacaacta	attttgtact	3060
ctcagaatgt	ttgtcatatg	cttcttgcaa	tgcataat	ttaatctcaa	acgttttcaat	3120
aaaaccattt	ttcagatata	aagagaatta	cttcaaat	agtaattcag	aaaaactcaa	3180
gatttaagtt	aaaaagtggt	ttggacttgg	gaa			3213

<210> 109
 <211> 6360
 <212> DNA
 <213> Homo sapiens

<220>

<223> von Willebrand factor (vWF) preproprotein;
coagulation factor VIII (F8VWF)

<400> 109

```
ctgggccacg tggcccgga gcttgctgcc tgacgctgtc ctacgagtc ccctgtctca 60
tcgcagcaaa aggagcctat cctgtcggcc ccacatgggc aagctgggtg gtcccgtga 120
caacctgcgg gctgaagggc tcgagtgtgc caaacgtgc cagaactatg acctggagt 180
catgagcatg ggctctgtct ctggctgect ctgcccccg ggcatggtec ggcatgagaa 240
cagatgtgtg gccctggaaa ggtgtccctg cttccatcag ggcaaggagt atgcccctgg 300
agaaacagtg aagattggct gcaacacttg tgtctgtcgg gaccggaagt ggaactgcac 360
agaccatgtg tgtgatgcca cgtgctccac gatcggcatg gcccaactacc tcacctcga 420
cgggctcaaa taactgttcc ccggggagtg ccagtagctt ctggtgcagg attactgcgg 480
cagtaaccct gggacctttc ggatcctagt ggggaataag ggatgcagcc acccctcagt 540
gaaatgcaag aaacgggtca ccatcctggt ggaggagga gagattgagc tgtttgacgg 600
ggaggtgaat gtgaagaggc ccatgaagga tgagactcac tttgaggtgg tggagtctgg 660
ccggtacatc attctgtctg tgggcaaaag cctctccgtg gtctgggacc gccacctgag 720
catctccgtg gtccctgaagc agacatacca ggagaaagtg tgtggcctgt gtgggaattt 780
tgatggcatc cagaacaatg acctcaccag cagcaacctc caagtggagg aagaccctgt 840
ggactttggg aactcctgga aagtgcagtc gcagtgtgct gacaccagaa aagtgcctct 900
ggactcatcc cctgccacct gccataacaa catcatgaag cagacgatgg tggattcctc 960
ctgtagaatc cttaccagtg acgtcttcca ggactgcaac aagctgggtg accccgagcc 1020
atatctggat gtctgcattt acgacacctg cctctgtgag tccattgggg actgcgcctg 1080
cttctgcgac accattgctg cctatgcccc cgtgtgtgcc cagcatggca aggtggtgac 1140
ctggaggacg gccacattgt gccccagag ctgctgaggag aggaatctcc gggagaaccg 1200
gtatgagtgt gagtggcgct ataatagtct tgcacctgcc tgtcaagtca cgtgtcacga 1260
ccctgagcca ctggcctgcc ctgtgcagtg tgtggagggc tgccatgccc actgccctcc 1320
agggaaaatc ctggatgagc ttttgagac ctgcgttgac cctgaagact gtccagtgtg 1380
tgaggtggct ggccggcggt ttgcctcagg aaagaaagtc acctgaatc ccagtgacct 1440
tgagcactgc cagatttgcc actgtgatgt tgtcaacctc acctgtgaag cctgccagga 1500
ggcgggaggg ctggtggtgc ctcccacaga tgcccgggtg agccccacca ctctgtatgt 1560
ggaggacatc tcggaaccgc cgttgacga tttctactgc agcaggctac tggacctggt 1620
cttctgtctg gatggctcct ccaggctgag ctcccagaag tgggtccgag tggcctggt 1680
tgtgtgggac atgatggagc ggctgcgcac ctcccagaag tgggtccgag tggcctggt 1740
ggagtaccac gacggctccc acgcctacat cgggctcaag gaccggaagc gaccgtcaga 1800
gctgcggcgc attgccagcc aggtgaagta tgcgggcagc caggtggcct ccaccagcga 1860
ggtcttgaaa tacacactgt tccaaatctt cagcaagatc gaccgcccctg aagcctcccg 1920
catgcacctg ctctgatgg ccagccagga gccccaacgg atgtcccga actttgtccg 1980
ctacgtccag ggcctgaaga agaagaaggt catttgtatc ccggtgggca ttgggccccca 2040
tgccaacctc aagcagatcc gcctcatcga gaagcaggcc cctgagaaca aggccttcgt 2100
gctgagcagt tgggatgagc tggagcagca aagggacag atcggttagct acctctgtga 2160
ccttgccctt gaagccctc ctctactct gcccccgac atggcacaag tcactgtggg 2220
ccgggggctc ttgggggttt cgacctggg gcccaagagg aactccatgg ttctggatgt 2280
ggcggttcgt ctggaaggat cggacaaaat tgggtgaagc gacttcaaca ggagcaagga 2340
gttcatggag gaggtgattc agcgatgga tgtgggccag gacagcatcc acgtcacgg 2400
gctgcagtac tctacatgg tgaccgtgga gtacccttc agcgaggcac agtccaaagg 2460
ggacatcctg cagcgggtgc gagagatccg ctaccagggc ggcaacagga ccaactactg 2520
gctggccctg cggtaacctc ctgaccacag cttcttggtc agccagggtg accgggagca 2580
ggcggccaac ctggtctaca tggtcaccgg aaatcctgcc tctgatgaga tcaagaggct 2640
gcctggagac atccagggtg tgccattgg agtgggccc aatgccaacg tgcaggagct 2700
ggagaggatt ggctggccca atgcccctat cctcatccag gactttgaga cgctcccccg 2760
agaggctcct gacctggtgc tgcagagggt ctgctccgga gaggggctgc agatccccac 2820
cctctcccca gcacctgact gcagccagcc cctggacgtg atccttctcc tggatggctc 2880
ctccagtttc ccagcttctt attttgatga aatgaagagt ttcgccaagg ctttcatctc 2940
aaaagccaat atagggcctc gtctcactca ggtgtcagtg ctgcagtatg gaagcatcac 3000
caccattgac gtgccatgga acgtggtccc ggagaaagcc catttgctga gccttggtgga 3060
cgtcatgcag cgggaggagg gccccagcca aatcggggat gccttgggct ttgctgtgcg 3120
atacttgact tcagaaatgc atggtgccag gccgggagcc tcaaaggcgg tggatcactc 3180
ggtcacggac gtctctgtgg attcagtgga tgcagcagct gatgccgcca ggtccaacag 3240
agtgcagtg ttccctattg gaattggaga tcgctacgat gcagcccagc tacggatctt 3300
ggcaggccca gcaggcgact ccaacgtggt gaagctccag cgaatcgaag acctccctac 3360
```

catgggcacc	ttgggcaatt	ccttccctcca	caaactgtgc	tctggatttg	ttaggatttg	3420
catggatgag	gatgggaatg	agaagaggcc	cggggacgtc	tggaccttgc	cagaccagtg	3480
ccacaccgtg	acttgccagc	cagatggcca	gaccttgctg	aagagtcac	gggtcaactg	3540
tgaccggggg	ctgaggcctt	cgtgccctaa	cagccagctc	cctgttaaag	tggaagagac	3600
ctgtggctgc	cgctggacct	gcccctgcgt	gtgcacaggc	agctccactc	ggcacatcgt	3660
gacctttgat	gggcagaatt	tcaagctgac	tggcagctgt	tcttatgtcc	tatttcaaaa	3720
caaggagcag	gacctggagg	tgattctcca	taatggtgcc	tgcagccctg	gagcaaggca	3780
gggctgcatg	aaatccatcg	aggtgaagca	cagtgccttc	tccgtcgagc	tgcacagtga	3840
catggagggtg	acggtgaatg	ggagactggt	ctctgttctt	tacgtgggtg	ggaacatgga	3900
agtcaacgtt	tatggtgcca	tcatgcatga	ggtcagattc	aatcaccttg	gtcacatctt	3960
cacattcact	ccacaaaaca	atgagttcca	actgcagctc	agccccaaga	cttttgcttc	4020
aaagacgtat	ggtctgtgtg	ggatctgtga	tgagaacgga	gccaatgact	tcatgctgag	4080
ggatggcaca	gtcaccacag	actggaatac	acttgttcag	gaatggactg	tgcagcggcc	4140
aggacagacg	tgccagccca	tcctggagga	gcagtgtctt	gtccccgaca	gctcccactg	4200
ccaggtcctc	ctcttaccac	tgtttgctga	atgccacaag	gtcctggctc	cagccacatt	4260
ctatgccatc	tgccagcagg	acagttcgca	ccaggagcaa	gtgtgtgagg	tgatgccttc	4320
ttatgcccac	ctctgtcgga	ccaacggggt	ctgcgttgac	tggaggacac	ctgatttctg	4380
tgctatgtca	tgccccaccat	ctctggtcta	caaccactgt	gagcatggct	gtccccggca	4440
ctgtgatggc	aacgtgagct	cctgtgggga	ccatccctcc	gaaggctgtt	tctgcctcc	4500
agataaagtc	atggttgaag	gcagctgtgt	ccctgaagag	gcctgcactc	agtgcattgg	4560
tgaggatgga	gtccagcacc	agttcctgga	agcctgggtc	ccggaccacc	agccctgtca	4620
gatctgcaca	tgctcagcg	ggcggaaagt	caactgcaca	acgcagccct	gccccacggc	4680
caaagctccc	acgtgtggcc	tgtgtgaagt	agcccgcttc	cgccagaatg	cagaccagtg	4740
ctgccccgag	tatgagtgtg	tgtgtgacct	agtgaactgt	gacctgcccc	cagtgcctca	4800
ctgtgaacgt	ggcctccagc	ccacactgac	caaccctggc	gagtgcagac	ccaacttcac	4860
ctgcgcctgc	aggaaggagg	agtgcataag	agtgtcccca	ccctcctgcc	ccccgcaccg	4920
tttgcccacc	cttcggaaga	cccagtgctg	tgatgagtat	gagtgtgcct	gcaactgtgt	4980
caactccaca	gtgagctgtc	cccttgggta	cttggcctca	accgccacca	atgactgtgg	5040
ctgtaccaca	accacctgcc	ttcccgacaa	ggtgtgtgtc	caccgaagca	ccatctacct	5100
tgtgggcccag	ttctgggagg	agggctgcga	tgtgtgcacc	tgacccgaca	tggaggatgc	5160
cgtgatgggc	ctccgcgtgg	cccagtgctc	ccagaagccc	tgtgaggaca	gctgtcggtc	5220
gggcttcact	tacgtttctg	atgaaggcca	gtgctgtgga	aggtgcctgc	catctgcctg	5280
tgagggtggtg	actggctcac	cgcgggggga	ctcccagttc	tcctggaaga	gtgtcggctc	5340
ccagtggggc	tccccggaga	acccctgcct	catcaatgag	tgtgtccgag	tgaaggagga	5400
ggtctttata	caacaaagga	acgtctcctg	ccccagctg	gagggtccctg	tctgccccctc	5460
gggctttcag	ctgagctgta	agacctcagc	gtgctgcca	agctgtcgct	gtgagcgcat	5520
ggaggcctgc	atgctcaatg	gcactgtcat	tgggcccggg	aagactgtga	tgatcgatgt	5580
gtgcacgacc	tgcgctgca	tgggtgcagg	gggggtcatc	tctggattca	agctggagtg	5640
caggaagacc	acctgcaacc	cctgccccct	gggttacaag	gaagaaaata	acacaggtga	5700
atgttgtggg	agatgtttgc	ctacggcttg	caccattcag	ctaagaggag	gacagatcat	5760
gacactgaag	cgtgatgaga	cgctccagga	tggctgtgat	actcacttct	gcaagggtcaa	5820
tgagagagga	gagtacttct	gggagaagag	ggtcacaggc	tgcccaccct	ttgatgaaca	5880
caagtgtctg	gctgagggag	gtaaaattat	gaaaattcca	ggcacctgct	gtgacacatg	5940
tgaggagcct	gagtgcacac	acatcactgc	caggctgcag	tatgtcaagg	tgggaagctg	6000
taagtctgaa	gtagagggtg	atatccacta	ctgccagggc	aaatgtgcca	gcaaagccat	6060
gtactccatt	gacatcaacg	atgtgcagga	ccagtgtctc	tgctgtcttc	cgacacggac	6120
ggagcccattg	cagggtggccc	tgcactgcac	caatggctct	gttgtgtacc	atgagggttct	6180
caatgccatg	gagtgcacaa	gctccccacg	gaagtgcagc	aagtgaggct	gctgcagctg	6240
catgggtgcc	tgctgctgcc	tgccctggcc	tgatggccag	gccagagtgc	tgccagtcct	6300
ctgcatgttc	tgctcttgtg	cccttctgag	cccacaataa	aggctgagct	cttatcttgc	6360

<210> 110
 <211> 9551
 <212> DNA
 <213> Homo sapiens

<220>
 <223> trichohyalin (THH, TRHY, THL, TCHH)

<400> 110
 aacaagccat ttgtggagac agagggtggag ctgggcttgg ttaggaatga atcaggccat 60

tccacagagt	gggtgtctcc	ttcccaagtt	gctttccagg	gcacaattaa	aacccctata	120
aaaggcccag	ctcccagtta	cccagtaac	ttgcctgtgg	tgtcagcaag	caactgtcgac	180
ttcttctctt	ggtgaagtgg	gtaagtccca	ttctgtggga	tcgtggtctt	ctttatgatt	240
ctccattttt	atagctattt	cagatggttg	gatatggggg	gaggttccat	gtgccagaag	300
gtatcagtat	tgcagggata	aataaactat	cactaactct	atcccatctt	cttatggttg	360
gagccatcac	ttgaactgaa	gcatgacct	tctccttggg	ctctgaactc	tatacttctg	420
cacatcaagg	atgatcatgt	gtggctctga	tagggttcat	cttcctaaaa	actgctatct	480
caaaagtttg	ccagccttct	gttctctttt	acattggttc	tacctaatat	gggccatatt	540
catacagtca	cagcatttaa	ggtactggag	ttgagaagta	cataaagaag	tcagctagat	600
gaacgactac	cttatcccac	cagcaaagcc	attccatgta	ttcttataac	attgatctac	660
tgctggctaa	tgttttataa	aaagccaaga	ttccaatgat	gcatttgggt	ttaacaaaac	720
caatatcatt	cacagttttc	tggattccgt	ttggtttaga	aaggacctct	cagaagcttt	780
caatacttca	atatccgaat	atcttactat	atctgagttg	aggcaggtaa	tatacagtct	840
ctgttttctg	catttgtgta	tctgaatggt	acatgccatc	ttttgactag	gaagaagtac	900
tattttaatct	tagaattgct	gacttacaaa	ttatatctca	taagagttcc	taaatccctt	960
tatggactgt	aatgttgagg	aatcattcat	attccctttt	cattgttcta	ttttctacca	1020
atcgttttgc	tgacatggcc	tctatccact	ttaagatact	ctcaagtctt	ccttcacctt	1080
ttggctttac	ctgtcctctt	cgctcaactt	taaaggaagg	tgtgtagcca	tataataaat	1140
tttaattttct	gcaactcttct	cttaattttc	tactctgaaa	tacggtggag	agctggaaga	1200
aagacagaag	aaaagggcat	agataatcca	cattgggttg	acaatcaaaa	gctgacaaca	1260
ggatagtctg	aagatgattc	cctggcttgg	aattttctcag	gatcgctctt	tctctttctg	1320
atacaatatt	caaatattaa	agtgctctga	aagtccaggt	tgaattacc	gctataaatt	1380
caaattatct	agggatctgc	ctgaaatagt	gtgaattgaag	ccttcccaaa	agcagaaacg	1440
ggattttgat	tctggatctt	attttattgt	tctaggttta	cttgaacttg	aaggaaagaa	1500
aaaaaaatgt	ctccacttct	gagaagcatc	tgtgacatca	ctgaaatttt	caatcagtat	1560
gtctctcatg	attgtgatgg	agcagcatta	actaagaaag	acctgaagaa	cctccttgaa	1620
agggaaatttg	gagctgtgct	tcgggtaaga	actaacaaga	aaatgagatc	tattgacttg	1680
aggctatgag	atttattctc	agaggagacc	agagcaagga	atgggtggtt	tatattcatt	1740
ttacaccaca	acaggtctac	actacatccc	ccattcattt	ctgagtcaaa	aggtacttac	1800
ttgacattgt	agtctgaata	ataaagtatt	tcatgtactt	gatggcatgg	catgtgaatg	1860
agctcttcac	gggacattac	tacaaaagat	gtcaaatac	actagacttg	gaggaacttg	1920
gaggaactta	aaattgtttc	caaatttcaa	aatcagatgc	agcctgactc	tattaaatgg	1980
tgtaccctgt	aaatgttttg	ttctgttttc	taatatggaa	tagaaaccaa	atcagaataa	2040
ctggctgctt	cagacagaaa	tggctactgc	aaatcctcat	aaatttctat	tgtatctctc	2100
tcaaggatga	gttcattctt	tctcaattaa	agcgaacttg	tgttattctt	tcttgatggt	2160
gagtagcttt	gttaattttac	acacaagttc	acgatgctgt	tttgaatctt	cacctcaggc	2220
tctgctctaa	ggtgcgtagg	cttacctgct	atctacttgt	gtctctcttc	ctgcttcctt	2280
aggtttgatc	agcactaaat	tacgagatgt	aaaaatttca	aacgaatata	tgctttaaag	2340
tgagggttca	cattttacat	ggggacaaaa	cttgatacac	actggacatt	tttctaattg	2400
ctctgaatgt	ctcttgaatg	tcagcatatg	ataaaatata	tcatgtgtga	atataatttt	2460
accacctgta	aatagtgcac	tgtaaaattt	ttgtttttca	ccattttata	gagaccacat	2520
gaccctaaga	cggtagatct	gatcctggaa	cttctggatc	gtgacagtaa	tgggcgtgtc	2580
gattttcaacg	aattcctcct	atttattttc	aaagtggctc	aagcttggtt	ctatgctctc	2640
ggccaggcca	cgggactgga	tgaggagaag	cgagcccggt	gtgacggaaa	ggagagcctg	2700
ttacaagatc	gacggacaga	agaagacca	aggagattcg	agccccggga	cagacaactg	2760
gaagaagaac	ctgggcaacg	acgcaggcag	aagaggcagg	aacaggagag	ggagctagct	2820
gagggagagg	agcaaagtga	gaaacaagag	cgacttgaac	agcgcgacag	gcagcgccgc	2880
gacgaggagc	tgtggcggca	aaggcaagaa	tggcaagaac	gggaagagcg	ccgtgcagag	2940
gaagagcagc	tgagagtttg	caaaggtcac	gaaactgagg	agtttccaga	cgaagagcaa	3000
ctgcgaaggc	ggagctgct	ggagctgagg	aggaagggcc	gcgaggagaa	acagcagcaa	3060
aggcgagagc	gccaagacag	agtgttccag	gaggaagaag	agaaagagtg	gaggaagcgc	3120
gagacagtgc	tccggaagga	agaagagaag	ttgcaggaa	aggagccgca	gcggaagaga	3180
gagctccagg	aggaagaaga	gcagctacgg	aagctggagc	ggcaagagct	gaggaggagg	3240
cgccaggagg	aagagcagca	gcagcaaagg	ctgaggcgcg	agcagcaact	aaggcgcaag	3300
caggaggagg	agaggcgcg	gcagcaggag	gagaggcgcg	agcagcagga	gaggcgcgag	3360
cagctgaggc	gcgagcagga	gcagcagctg	aggcgcgagc	aggaggagag	gcgcgagcag	3420
gaggagaggc	gcgagcagga	ggaggagagg	cgcgagcagc	agctgaggcg	cgagcaggag	3480
ctgaggcgcg	gcgagcagca	gctgaggcgc	gagcaggagg	aggagaggcg	cgagcagcag	3540
cgcgagcagc	agctgaggcg	gagcagctga	gagcagctga	ggcgagagca	gcagctgagg	3600
cagcagctga	ggcgagagca	gcagctgagg	cgcgagcagc	agctgaggcg	cgagcaggag	3660
						3720

gaggagaggc	acgagcagaa	gcacgagcag	gagaggcgcg	agcagcggct	gaagcgcgag	3780
caggaggaga	ggcgcgattg	gctgaagcgc	gaggaggaga	cggagaggca	cgagcaggag	3840
aggcgcaagc	agcagctgaa	gcgcgaccag	gaggaggaga	ggcgcgaacg	ttggctgaag	3900
ctcgaggagg	aggagaggcg	cgagcagcag	gagaggcgcg	agcagcaact	aaggcgggag	3960
caagaggaga	ggcgcgagca	gcggctgaag	cgccaggagg	aggaagagag	gctccagcag	4020
cggttgagga	gcgagcaaca	actaagacgc	gagcaggagg	agaggctcga	gcagctgctg	4080
aagcgcgagg	aggagaagag	gctcgagcag	gagaggcgag	agcagcggct	gaagcgcgag	4140
caggaggaga	ggcgcgatca	gctgctgaag	cgcgaggagg	agaggcgcca	gcagcggctg	4200
aagcgcgagc	aggaagagag	gctcgagcag	cgactgaagc	gcgaggaggt	ggagagactc	4260
gagcaggagg	agaggcgcg	cgagcggctg	aagcgcgagg	agccggagg	agagaggcgc	4320
cacgagctgc	tgaagagcga	ggagcaggag	gagaggcgcc	acgagcaact	gaggcgcgag	4380
cagcaggaaa	ggcgcgagca	gcggctgaag	cgcgaggagg	aggaagagag	gctcgagcag	4440
cggctgaagc	gcgagcagca	ggaagagagg	cgcgagcagg	agctagctga	ggaggagcag	4500
gaacaggccc	gggagcggtg	taagagccgc	atcccgaagt	ggcagtggca	gctagaaaagc	4560
gaggccgacg	cacggcaaa	caaagtctta	ctcgaggccc	cgcaagcagg	aagggcagag	4620
gcgcgcgaag	agcaggagg	aaagaggcgg	cgcgagagt	agctgcaatg	gcaggaggag	4680
gaacgggctc	accggcagca	gcaggaagag	gagcagcgcc	gggacttcac	atggcagtgg	4740
caggcgagg	aaaagagcga	gaggggcccgt	cagaggctgt	cgccaggcc	cccattgcgg	4800
gagcagcggg	agaggcagct	gagggcccgag	gagcgccagc	agcgggaaca	acggtttctc	4860
ccggaggagg	aggagaagga	gcagcgcgcc	cgccagcgac	gcgagaggga	gaaagagctg	4920
cagttcctgg	aggaagagga	gcagctccag	cgccggggagc	gtgcccaaca	gctccaggag	4980
gaggaggacg	gcctccagga	ggatcaggag	aggaggcgac	aggagcagcg	ccgcgacc	5040
aatggagggt	ggcaactaga	agaagaaagg	aagagacgcc	gccacacgct	gtacgccaa	5100
ccagccctac	aagagcagct	gaggaaggaa	cagcagctgc	tgcaggagga	ggaggaggag	5160
ctacagagag	aggagcgcg	gaagagaagg	cgccaagaac	aggagagaca	ataccgcgag	5220
gaagagcagc	tgcagcagga	ggaagagcag	ctgctgagag	aggaacggga	gaaaagaaga	5280
cgccaggagc	gggaaaggca	atatcggaag	gataagaagc	tgcagcagaa	ggaagagcag	5340
ctgctgggag	aggaaccgga	gaagagaagg	cgccaggagc	gggagaaaaa	ataccgcgag	5400
gaagaggagt	tgcagcagga	ggaagagcag	ctgctgagag	aggaacggga	gaagagaagg	5460
cgccaggagt	gggagaggca	gtaccgcaaa	aaagacgagc	tgcagcagga	agaagagcag	5520
ctgctgagag	aggaacggga	gaaaagaaga	ctccaggagc	gggagaggca	atatcgggag	5580
gaagaggagc	tgcagcagga	ggaagagcag	ctgctgggag	aggaacggga	gacgagaagg	5640
cgccaggagc	tggagaggca	atatcggaag	gaagaggagc	tgcagcagga	ggaagagcag	5700
ctgctgagag	aggaaccgga	gaagagaagg	cgccaggagc	gggagaggca	atgtcgggag	5760
gaagaggagc	tgcagcagga	ggaagagcag	ctgctgagag	aggaacggga	gaagagaagg	5820
cgccaggagc	tggagaggca	atatcgggag	gaggaagagc	ttcagcgcca	gaaaaggaaa	5880
cagcgatacc	gggatgagga	tcagcgagct	gatctgaaat	ggcagtggga	accagaaaaa	5940
gaaaatgcag	ttcgtgataa	caaggtttac	tgc aaaggca	gagagaatga	acagttcccg	6000
cagttggaag	attcccaggt	gcgcgacaga	caatcccagc	aagatctgca	gcacctgctg	6060
ggtgaacagc	aagagagaga	tcgtgagcaa	gagaggaggc	gctggcagca	ggccaacagg	6120
catttccag	aggaagcaaca	gctggagcga	gaagagcaaa	aggaagccaa	aaggcgcgac	6180
aggaagtccc	aagaggaaaa	gcagttgctg	agagaggaaa	gagaagagaa	gagacgcctg	6240
caagagacag	acagaaaatt	ccgcgaggag	gaacagctgc	tccaggaaaag	ggaggaaacag	6300
ccgctgctcc	gccaagagcg	tgacagaaaa	ttccgcgaag	aggaactgct	ccatcaggaa	6360
caaggagaaa	aattcctcga	ggaggaacag	cggtgcgcgc	aggaacggga	gagaaaaattc	6420
cttaaggagg	aacagcagct	gcgcctcgag	gagcgcgagc	aactgcgtca	ggaccgcgac	6480
agaaaattcc	gcgaggagga	acagcagctg	agccgccaa	agcgtgacag	aaaattccgt	6540
gaagaggaa	agcagggtgcg	ccgccaggaa	cgagagagaa	aattcctgga	ggaggaacag	6600
cagctgcgcc	aggagcgctca	cagaaaattc	cgcaagagg	aacagctgct	ccaggaaagg	6660
gaagaacagc	agctgcaccg	ccaagagcgt	gacagaaaat	tcctggagga	ggaacaacag	6720
ctgcgcgcgc	aagagcggtga	cagaaaattc	cgcaacagg	aactgcgcag	tcaggaacca	6780
gagagaaaat	tcctcgagga	ggaacagcag	ctgcaccgcc	agcaacggca	gagaaaattc	6840
ctccaggagg	aacagcagct	gcgcgcgccag	gagcgcgggc	aacagcggcg	tcaggaccgt	6900
gacagaaaat	tccgcgagga	ggaacagctg	cgccaggaga	gggaggaaca	gcagctgagc	6960
cgccaagagc	gtgacagaaa	attccgttta	gaggaacaga	aagtgcgcgc	ccaggaacaa	7020
gagagaaaat	tcattggagga	cgaacagcag	ctgcgcgcgc	aggagggcca	acaacagctg	7080
cgccaggagg	acagaaaatt	ccgcgaagac	gaacagctgc	tccaggaaaag	ggaagaacag	7140
cagctgcacc	gccaagagcg	tgacagaaaa	ttcctcgagg	aggaaccgca	gctgcgcgcg	7200
caggagcgcg	aacaacagct	gcgtcacgag	cgcgacagaa	aattccgtga	agaggaacag	7260
ctgctccagg	aaggggagga	acagcagctg	cgccgccaag	agcgtgacag	aaaattccgc	7320
gaagaggaa	agcagctccg	ccgtcaggaa	cgagagagaa	aattcctcca	ggaggaacag	7380

cagctgcgcc	gccaggaact	ggagagaaaa	ttccgtgagg	aggaacagct	gcgccaagaa	7440
acggagcaag	agcagctgcg	ccgccaagaa	cgctacagaa	aaatcctaga	ggaagagcag	7500
ctccgtccgg	aaaggggaaga	acagcagctg	cgccgccagg	agcgcgacag	aaaattccgc	7560
gaggaggaac	agctccgcca	gggaagggag	gaacagcagc	tgcgcagcca	agagtctgac	7620
agaaaaattcc	gcgagggagga	acagctacgc	caggagaggg	aagaacagca	gctccgcccc	7680
caacagcgtg	acggaaaagta	tcgctgggaa	gaagagcagc	tccaacttga	ggaacaagag	7740
cagaggctgc	ggcaggagcg	agaccggcag	taccgggagg	aggagcagtt	tgccacgcag	7800
gagaagagtc	gtcgtgagga	acaagaacta	tggcaagaag	aggagcagaa	acgtcgccag	7860
gaacgggaaa	ggaaattacg	ggaagaacac	atccgccgcc	agcagaagga	ggaacagagg	7920
caccgccaag	tcgggggagat	acaatcccaa	gaaggggaag	gccatgggag	gcttctggag	7980
cccggcactc	atcagtttgc	cagtgtccca	gtgcgctcca	gccctctcta	tgagtacatc	8040
caagagcaga	gatctcaata	ccgcccttaa	gtgatgttgc	caatatcttg	acacctgcca	8100
aagcttccag	cacgggaaaa	tgagaaacac	tgggtacca	gtgataactc	agatgtttct	8160
ggttgtggga	aaactctctg	atattagaat	gtcttttctt	ccaaaatctt	aaactacgct	8220
cattttacgc	actttgtact	tctgcttttt	attcttctct	aagtagttct	ttactgcaag	8280
atgtctttct	tttgctcttt	gatgcagatg	tgggtgtgcat	ttaaaaaaa	tataaatcat	8340
ttaatttggt	taagaaattt	tgtttgagga	acatgttcat	ttattgcttt	cagaagtaac	8400
aagagtaata	ggatgatttg	agattctaaa	caatgggtcg	gtttgtttta	tgactgacct	8460
atcttgtgga	aagtgcagat	actttttaatg	ttcaagttgc	tatttcttct	tgaacctaaa	8520
ttgatcattg	cctccaaaca	gcatttcatc	cttttgtggc	atagtttagca	caaattccag	8580
gtaactaaat	ttttataacc	cttgaatagt	gcagggggag	tgacctctgc	ataaaaactt	8640
cctgtaaaa	cagcccat	ctggaagaaa	tatctgttaa	gaatagggtt	agctttgaag	8700
atttagaatt	taaattagat	ttttttttaa	ctcaactcca	cttaaacaca	taatctcatg	8760
aagaaataat	gaggtattta	gaattttaaat	gagttcaaat	tttaaaactg	tgtctgttgt	8820
agtctatagt	gttcatttcta	cttccccaag	ttttgatgag	tttcagaata	ttatgaacct	8880
ttgttaattt	tagcttggtta	gaaggaagct	gctcagaatc	ccataaacat	ctgtcttact	8940
ctagggccaa	taagagatca	catagagcat	gttgggggtg	taaaagggaa	aaatgtgtga	9000
acataggggc	aaatttctag	aggccctttg	acaagacca	tttgccaca	atcatttgag	9060
gcctattgat	aataccttag	atatattctt	gttgaaataa	ttggactgtg	aaaaattaat	9120
aataaatggt	tggcaagtaa	ctacttttgt	ctgttttaac	tctgogtcaa	tcataacaag	9180
atctcattgt	ctggaaacta	acacaagttc	ccaatcacat	aagggcattt	tgttacttat	9240
ctatgtccaa	atacgaaaaa	agaggggaga	gaattctttg	tttttcccca	accttttttt	9300
tttttttttt	tttttttttt	tgcagtttag	ctgaactcta	tttccatccc	cacactgaga	9360
ttgccttcca	gagtgttttt	gttcttgacc	cacagctttc	tatgccattc	ttgcagcgac	9420
tcactgggtca	tgacaaatac	tgggtgctccc	aatatttgtt	aatatttctt	ttagagaatg	9480
cagcagcttc	ttcgtctctg	atgtctgatg	agccaatgat	agaaaatggc	ctgaaacttc	9540
agatcctcga	g					9551

<210> 111
 <211> 730
 <212> DNA
 <213> Homo sapiens

<220>
 <223> cystatin A (CSTA); cystatin AS; stefin A (STF1)

<400> 111						
atztatgaat	acaaagagtc	taagaatggt	ggactaggtc	tagcaatgct	gttcctcagc	60
agcttttttg	acagaagtct	ttgtagacct	gtggctctct	cacttgatgt	agaccttatt	120
gaatgaatct	ccttttgctt	tctctttctt	taatatTTTT	caggtacgag	caggtgataa	180
taaatatatg	cacttgaaag	tattcaaaaag	tcttcccgga	caaaatgagg	acttgggtact	240
tactggatac	caggttgaca	aaaacaagga	tgacgagctg	acgggctttt	agcagcatgt	300
acccaaagtg	ttctgattcc	ttcaactggc	tactgagtca	tgatccttgc	tgataaatat	360
aaccatcaat	aaagaagcat	tcttttccaa	agaaattatt	tcttcaatta	tttctcattt	420
attgtattaa	gcagaaatta	ccttttcttt	ctcaaaatca	gtgttattgc	tttagagtat	480
aaactccata	taaattgatg	gcaattggaa	atcttataaa	aactagtcaa	gcctaatagca	540
actggctaaa	ggatagtacc	accctcacc	ccaccatagg	caggctggat	cgtggactat	600
caattcacca	gcctccttgt	tccctgtggc	tgtgtgataa	ccaacattcc	atctctaccc	660
ctcatacttc	aaaattaaat	caagtatttt	acaaagtgtg	tgtgtgtgtg	tgtgtgtgta	720
tatatacact						730

<210> 112
 <211> 2597
 <212> DNA
 <213> Homo sapiens

<220>

<223> adducin 2 (ADD2); adducin 2 (beta); beta adducin;
 beta adducin 2; rabphilin-3A-interacting protein

<400> 112

```

gaatgtctgc acagccgctt tccacacaga catcataaca aaaaatttcc accaaacccc 60
ctccccccgc ttctggccac agcacttaaa cacatctctg ccaaaccat aaaataacaa 120
aaccaaccgg cagtggccga cgggagatag ctaagatgcc gcgcaggagt ttccacctgg 180
atgttttgagg ttgtgtagat gtggccggca cccttgagag tggagctagg ggggtgcagac 240
tgagcagtga acagaaggag ccttgacag ggctgggcca gcctcccag ttccaggagc 300
gaattgcaaa cccaccggga aaatgagcga agagacggtc cccgaggctg cctcgccgcc 360
gcccccgag gggcagcctt actttgaccg cttctcagag gacgaccccc agtacatgcg 420
ccttcgcaac cgggcggcgg acctgcggca ggacttcaac ctgatggagc agaagaagcg 480
cgtcaccatg atcctgcaga gtccctcttt cagggaggag ctggaaggcc tcatccagga 540
gcagatgaag aaggggaaca actcctccaa catctgggcc ctgcgacaga tcgcggactt 600
catggccagc acctcccacg cagtcttccc gacatcttcc atgaatgtct ccatgatgac 660
gcctatcaat gacctccaca cagctgactc cctgaacctg gccaaagggg agcggctcat 720
gcggtgcaag atcagcagtg tctaccgact cctggacctc tatggctggg ccagctgag 780
tgacacctat gtcacgttga gagtacgcaa ggagcaggac cacttctga tcagccctaa 840
gggagtttct tgcagtgaag tcacagcgtc cagcctgata aaggtgaaca ttctgggaga 900
ggtggtggag aagggcagca gctgcttccc agtggacacc acaggcttct gtctgcactc 960
ggccatctat gcagcgaggc ccgacgtgcg ctgcatcctc cacctgcaca caccggccac 1020
agcagcggtg tcggccatga agtggggcct cctgcctgtc tcccacaatg ccctgctggg 1080
gggggacatg gcctattatg acttcaatgg ggaaatggag caggaagccg atcggatcaa 1140
cctgcagaag tgccttggac ccacctgcaa gatcctggtg ctaagaaacc atggagtggg 1200
tgctctgggt gacacggtag aggaggcatt ttacaagatc ttccacctgc aggtgcatg 1260
tgagatacag gtgtcggctc tgtccagtgc cgggggagtg gagaacctca tcctcctgga 1320
gcaggagaag caccggcccc atgaggtggg ctccgtgcag tgggcccggg gcacctttgg 1380
gcctatgcag aagagtgcgg tgggggagca tgagtttgag gccctcatga ggatgctgga 1440
caacctgggc tacagaacag gttacacgta tcgccacccc tttgttcaag agaaaaccaa 1500
acacaaaagt gaggtggaga ttccagccac ggtcacagcc ttctgttttg aggaggacgg 1560
tgccccgggtg cccgcccctgc gacagcatgc ccagaagcag cagaaggaga agaccgctg 1620
gctcaatacg cccaacacct acctgcgggt caatgtggcc gatgaggtcc agaggagcat 1680
gggcagcccc cgacccaaga ccacgtggat gaaggctgac gaggtggaga aatccagcag 1740
tggcatgccc attcgcctcg aaaacccaaa ccaatttgtg cctctctata ctgaccccca 1800
ggaagtactg gagatgagga acaagattcg agaacaacac cgacaagatg tgaagtcagc 1860
ggggcctcag tcccagctcc tggcgagcgt cattgccgag aagagccgaa gcccgcttac 1920
agagagccag ctgatgtcca agggagacga ggataccaaa gacgattcag aggagacggt 1980
gccccacccc ttcagccaac tcaactgacca ggagttggag gagtacaaga aagaggtgga 2040
gaggaagaaa ctagaacttg atggagagaa agaaaactgcc ccagaagagc ctggctcacc 2100
tgcaaagtct gcacctgctt ctccagtgcg gagcccagcg aaggaggcag agacaaagag 2160
cccttttagtc tctccttcca agtcttttaga ggaaggtact aagaagacag aaacaagcaa 2220
agccgccacc acagagcccg aaacaaccca gccggaaggg gtggtggtca acgggaggga 2280
ggaggagcag acggcagagg aaatcctcag caaaggcctg agccagatga ccaccagtgc 2340
tgacacggat gttgatacct ctaaggacaa aaccgagtcg gtcaccagcg gccccatgtc 2400
cccagagggc tcaccttcca agtctccttc aaagaagaaa aagaaattcc gaaccccctc 2460
cttctgaaa aagagcaaaa agaaggagaa agtggagtcc tgattcatga cacccttggg 2520
ctccctcctg cctcctctct ctccctccct tcccttctcc catctctgtc cctgcaagca 2580
cagggctaag gagggat
2597

```

<210> 113
 <211> 802
 <212> DNA
 <213> Homo sapiens

<220>
 <223> amelogenin (AMELY, AMGL, AMGY) precursor;
 amelogenin (Y chromosome)

<400> 113
 agaggaccaa gcctccctgt gtagcacaaa gaaagtttct ctgaatatat ttaaagaacc 60
 atcaagaaat ggggacctgg attttgtttg cctgccttgt gggagcagct tttgccatgc 120
 ctctaccacc tcctcctggg caccctgggt atatcaactt cagctatgag gtgctcacc 180
 ctttgaagtg gtaccagagc atgataagac caccatactc ttctctatgtg tacgagccca 240
 tgggtggatg gctgcaccac caaatcatcc ccgtgggtgtc ccaacagcac cccctgactc 300
 acaccctgca gtctcatcac cacatcccag tgggtgccagc tcagcagccc aggggtccgcc 360
 agcaagcact gatgcctgtt cctggccagc aatccatgac tccaacccaa caccatcagc 420
 caaacctccc tctgcctgcc cagcagccct tccagcccca gcctgttcag ccacagcctc 480
 accagcccat gcagcccccag ccacctgtgc aacctatgca gcccctgctg ccacagccac 540
 ctctgcctcc aatgttcccc ctgcggcccc tgcccccat acttctctgat ctgcatctgg 600
 aagcttggcc agcaacagac aagaccaagc aggaggaagt ggattaaaag accagaatat 660
 gagacaggaa ctgaagtaaa cacttttagt gctttcaggg atgacacaag cacacaatga 720
 tttttgctta caatcactta acttagcaaa ttctgtaact aaaaatgtac caatagtaga 780
 caataaaatg ttttaaaaat ca 802

<210> 114
 <211> 419
 <212> DNA
 <213> Homo sapiens

<220>
 <223> adipose specific collagen-like 2; adipose specific
 collagen-like factor; adipose most abundant gene
 transcript 2 (APM2, apM2); adipose specific 2;
 GS2374

<400> 114
 ctcttgacga ctccacagat accccgaagc catggcaagc aagggcttgc aggacctgaa 60
 gcaacagggtg gaggggaccg cccaggaagc cgtgtcagcg gccggagcgg cagctcagca 120
 agtgggtggac caggccacag agggcgggca gaaagccatg gaccagctgg ccaagaccac 180
 ccaggaaacc atcgacaaga ctgctaacca ggcctctgac accttctctg ggatcgggaa 240
 aaaattcggc ctctgaaat gacagcaggg agacttgggt cggcctcctg aaatgatagc 300
 agggagactt gggtgacccc ccttccaggc gccatctagc acagcctggc cctgatctcc 360
 gggcagccac cactcctcgc gtctgcccc tcatataaat tcacgttccc accctgaaa 419

<210> 115
 <211> 18061
 <212> DNA
 <213> Homo sapiens

<220>
 <223> cytokeratin 20 (CK-20); keratin 20, type I-like,
 cytoskeletal (KRT20, K20); keratin, type I
 cytoskeletal 20; protein IT

<400> 115
 tgtaccgagc tctaatacga ctactatag ggcgtcgact cgatcatccc aacacccagg 60
 tattaagcct agcgtccatt agctattctt cctgatgctt tcccccaac cacagggtgcc 120
 agtgtgtgtt gttctccgcc atgtgtccct gtgtggaaaa tataatatgc attcttaacc 180
 tgtcaatata taaagttaat ctgtatgttt gctgttttcc taaacagtcc cgcaatttag 240
 aacaatttaa ctccattcat ccccttccag cctcatcta cttaattcc atattgtttt 300
 ttctttctca tagatatatt attttatagc caatacttgt ctttacattt acatttgggtc 360
 gcatgcttag cactctattt gttcattatt ttaattcttt tatgcatctc agaactttca 420
 tctggaatca tcttccttct gcttaaaaca cattctttca gattgctctt agtgaaaact 480
 tagaagttag tggcaaatc agttttttaa atgttgaaaa tggctttatt ttacccttct 540
 tcaaatataa tgttaccgag tcagaaaatt ccggaatggc agttatttcc tccagcaca 600

ttgaagattc	tattccattt	ccagtgtcca	ttgttgcttt	tgaggagtca	gtcatcagtc	660
taaccaccat	tcctttgttg	gtgattttatt	ctctatctgc	ttgtaattat	ctggttttct	720
gcctcaatgt	gtgtagtgat	ttattttttat	tccttttgcc	tggaattcat	taggtctcct	780
taatctgaga	acttgggttt	tttttaaaga	attctataaa	attctcactt	ttatttttgt	840
gaatgttttc	ttattctctt	gtgtcttctt	ctggaactct	gattagacat	atttagacct	900
tctaattata	gccttcatgc	cttcttgact	tcctccttcg	tcacttagct	gcattctgga	960
aattttcctc	agagctacat	tttgttcaat	aatcctggct	taatctgttc	ctggatccat	1020
ccactgaact	tgtaatttta	acggcattat	ttattttcctc	tggtttgtat	ttcagatctg	1080
cttggtactt	gtcccaattt	taagtttggt	ttattttcta	aaacaattta	tatttatatt	1140
cttcatccaa	tcattctata	gccactatga	gacaataaat	aaatccatcc	aactcatcaa	1200
aacacagctg	agaattacca	aataagtaca	aacaaaaacc	taaataatgac	tgattaactg	1260
tgcagaatac	aatgatgtaa	gtttactata	catcaacctc	cttgtaacca	tctcctcgct	1320
tcaacaaata	actcagggca	aaacttcctt	catccatact	tccacctctc	ttctcctgt	1380
ctgaacaaga	tgccactcca	gagactcgag	gttctatgtc	tatcataatg	gattgcaata	1440
gcttggtcat	ggtagaatac	aaaaaaaaag	aaaaaagttg	aaagccctct	gaaaactgta	1500
gtgcttataa	tagccttccc	aactactggc	catacttaat	attaatcatt	aacactctca	1560
gtagagtgtc	tcagaagtca	aaatgtatct	cctactagct	acaaggaagt	tgggatctaa	1620
taagtattta	tttacagctg	cagtcaccca	acagcctgaa	ataccagggt	ctctaaattc	1680
atgactttgt	gtatgaacaa	gggtcaatag	gatctttact	cagtcctcga	gatataactc	1740
agaaaaatga	attgctgtga	aaaactcact	tgatttcctg	tggtcacatt	ataagatcga	1800
ataatctaca	aaagtacaaa	actcagtgat	atagagaagc	cagcaaatcc	tcctgccctt	1860
atataaacag	gtgggaggct	ttccagtaga	attttttcta	ctccaacaaa	ttggtagatt	1920
gaatgactat	acctcataat	gatgacacta	ttgtatcata	ttttagttta	aatttaaaac	1980
ctcaaaaact	tacaaaaact	agccaaaagat	ttctggaata	agatatagac	aaagttattt	2040
ctcaaaaaaa	agaaaaaaat	tggctgggcc	gggtgcagtg	gtcacgcct	gtaatgccag	2100
cactttggga	ggctgaggca	ggcagatcac	aaggtcaagg	gatcaagatc	aggctggcca	2160
acgtggtgaa	accccatctc	tactaaaaat	acaaaaatca	gctcggcggt	ggtgccacc	2220
tgtaatccca	gctactaggg	aggctgaggc	aggagaattg	tgtgaaccgg	ggagggggag	2280
gttgacagtga	gctgagatca	tgccactgca	ctccagcctg	gtgacagagc	aaagctccgt	2340
ctcaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	cggctggaca	caggggctca	cacctgtaat	2400
cccatcattt	tgggagggtg	gggtgggagc	atcacttgag	ctcaggagtt	tgagtccagc	2460
ctggggcaaca	tgtggggacc	ctgtttctac	caaaaataaa	taaataaaaa	ttatgtaagc	2520
atggcgtgtg	tgctgtagt	cccagctact	tgagaggctg	aagcaggagg	atcacttgag	2580
cctgggagggt	caaggctgca	gtgagctgtg	attgtgtcac	tgactccag	cctgggtcac	2640
acagtgagac	cctgtctcaa	aataaaaaata	aaatggaaaa	taactaaaaa	tgggattttc	2700
aactctttga	tataaatagg	tccagccata	aggaagaatt	gtgctacaaa	agagaacaaa	2760
aatcatcatg	tttaacaact	gcattcatgt	tcttttctaa	ttataaagct	aactattgat	2820
tttataatgc	ttctacacac	cttgatcatg	tgttagcata	tgaaactctt	agctgagacc	2880
aacttactat	aaaacttgtg	taattttaat	agtataattt	tccaatgact	ttaatctaac	2940
aacctcctac	ccatttaatc	aacacccaaa	acaattcatc	tttgaataca	tgtataaaga	3000
acatagttca	tgtgtttata	aaaagttctt	ctctgctaca	gagtttagct	gtgacatcta	3060
ttaacaaaag	aatttataac	tctaataagt	tagcaaggct	ttcttgctac	cagtcacgtc	3120
attgggtggtg	agtactcagt	attggctgat	gaatacatga	atggataaaa	atataagagc	3180
tgcccacaca	tataccataa	aatgcataaa	atagattcca	ttttatctca	atttttatct	3240
ctgtgatata	actaagataa	aatcaaacac	aatgtattat	tttaaagtat	actgtttata	3300
agagagaaat	aataagatct	gaccttattt	tagaagaaaag	ttgtgtgtaa	aagaaattta	3360
aactcaaaag	taaaaaagcc	actggtttct	aaaaactcaa	aaaaaatttt	ttttaagtga	3420
ctggctttca	gaacaacagc	aacaacaaat	aagccactaa	aataagacaa	ttaaattcca	3480
attttttttg	catttacttg	cttgcttaat	tatatacaaa	tctcaattcc	attaaagtat	3540
caggatgaca	attaattaga	tgtttttagt	gactttttcca	atcccttcta	attaaacttg	3600
aagtgattaa	ctgattatct	aattatatta	attagtgatt	atctaattaa	ctaaggaagt	3660
gatttacatg	cttcatggga	agtgtgaatt	ctcagccagg	gggtttgaat	gaagggaagc	3720
aagtgactca	ggcattttatt	ggttgcttac	aatcagattc	ccaccgatga	gatcatgcc	3780
atgtgtctag	aggctccacac	acaagcagct	gcctccagcc	caaccctgga	agctgagtgt	3840
agtcccaagt	ccccgcctgc	accccttcct	atataaacag	ccactctcgc	tgtgattatg	3900
ggggcataca	aggaagatca	ggcttccatg	gaagcttctg	caactgaaat	ccactgggga	3960
ctttagaagg	agcacctgta	agtagcttca	ggatggatgg	ggcagagtct	gtctcatggt	4020
gggtgttaag	ctggcctcat	acaaaagagg	agacccatcc	tgataccatg	ccaggtacaa	4080
agcactgtgt	gattttattct	aagtgtcttg	gtaacaggac	ttgaagccag	gtggtgactg	4140
gaaacctaata	atgcaatatt	tagtcataga	acattagaaa	tagaaagaaa	ataacctccc	4200
aatcatctta	atccatcact	cagctaaatt	catttaattc	acatccccaa	actacatctc	4260

caaattgtaca	atgggtttcat	tcctgggttta	gggatttcgag	gtttttgtgtt	tgtacaaaaat	4320
atttttaatag	tcttataaaaa	taagatgtcc	aaaacacaat	aaacttaaaa	gccaaacaca	4380
agcaaagcat	gaaacagagg	ttctgaagag	caactcctca	atacaaatca	aacattgtcc	4440
tttatctcca	ttgtgacttt	cagttatgta	ggcacatctg	ccttttttaga	tacctaaatt	4500
atacatgagg	attgtaaaata	ttctttgtgt	gtatgttagg	atgaaaaaaa	cctgccaaag	4560
caggcgcatg	ggctaaaaga	atacactttc	ctgtttccct	ttattacctg	tttaattaaa	4620
aaaaaaaaaa	gttgcccctg	ataaaagcct	ccaagaaatg	cctctagtgg	tattttctgg	4680
aattgaatta	agcatattaa	catattgcta	tacaaagcgg	ggggcgtgga	agtaaggcaa	4740
ggtggactgt	ggtgccaatc	ctagtgcacat	gtcagcagag	gaggagtttc	ttgcctgtgg	4800
acttcataaa	aggctagctc	aacaccctcc	atgagacaca	ctctgcccc	accatcctga	4860
agctacaggt	gtccctcct	ggaatctcca	atggatttca	gtcgcagaag	cttccacaga	4920
agcctgagct	cctccttgca	ggccctgtga	gtcagtagag	tgggcatgca	gcgcctcggg	4980
acgacacca	gcgtttatgg	gggtgctgga	ggcgggggca	tccgcatctc	caactccaga	5040
cacacgggtg	actatgggag	cgatctcaca	ggcggcgggg	acctgtttgt	tggcaatgag	5100
aaaatggcca	tgcagaacct	aaatgaccgt	ctagcgagct	acctagaaaa	ggtgcggacc	5160
ctggagcagt	ccaactccaa	acttgaagtg	caaatcaagc	agtggtagca	aaccaacgcc	5220
ccgagggctg	gtcgcgacta	cagtgcata	tacagacaaa	ttgaagagct	gcgaagtcag	5280
gtgagagatg	atgcttgtgt	ttctactct	gtgttttagct	tcaagataaa	tcaagaggtt	5340
atctatgtta	ggtaggtcca	aatggacttt	gtaaagcaaa	ttaggctaaa	atgttacatc	5400
tataaaaaat	ctttcatcta	ccttttagtgc	tggagtacct	gactgtacaa	taggatgacc	5460
ttaaatcatg	ctattttttaa	tgtttaacac	aattacatac	aaaatatgaa	catttttatcc	5520
tccggaataa	aatgaactct	tgtcacagct	tatcacatca	gggctaaatg	tatagtgaac	5580
aatctttctg	aaaagagcta	aaaattaatt	acgtgataaa	tctctcttag	tttttcacct	5640
agtccttctc	aagttttgaa	acccagtaaa	attcaaagac	ttttctcctt	ttatttaagt	5700
aaatgttata	atatgactat	tagaatactg	tactgcagat	ttaaatagca	aagtgattct	5760
gggtggaaac	agtgtggcag	gaatatgggt	cttaatgatg	cctggatttt	taagtgcctt	5820
gtttaataac	atgaccatca	gcacaaagca	gttcagaaac	tacttctaca	gtaataaaat	5880
gttctattgc	cccccaattca	tgtttattac	aatcatatca	caacctcctc	ctatgtcatc	5940
aaaaaaagg	tggagctctg	tattttatca	gtttcatgga	ataaaaagcag	aagactttgc	6000
tcctaattga	aaatttccaga	tatgacacag	agcacttgct	tcaaatataa	gttcttatct	6060
aattaagaaa	agtgttccact	gtaatttgtg	ttaagattca	tactccttta	gagcaaagcg	6120
catttactta	ccagcaagtc	tgttttctct	gagttgtact	aaacatcagg	gcaatttgat	6180
tcggactcca	tgggaagtta	cttttggaaat	ttagaacta	taggcattgtg	aagcaatggc	6240
atttaaatag	cgcttccgg	aataaagttc	atcctctgca	agctctcact	aaaaatgttc	6300
gaaccacacc	tgtctcgtgt	ttctgactct	agtttggttc	atctgaaata	cacagcacag	6360
gccatccgtc	ccattgagct	ggacagtccc	aaccatagga	agcagccctc	tccaaaactg	6420
ggtccattga	aagagaaatg	tcattgtaac	atcctctgca	agtagatttt	tcacttatat	6480
gcctccatca	tgcatttcgt	tctttcatgc	atcatgttct	ttcattcagc	caatactgaa	6540
tgaacactaa	ctaggtgctg	ggcaccatgc	tggggactga	ggaatattat	ggtggacaca	6600
atagtattta	tgaggataca	gggatggaca	gagggaccag	cacacagagg	gataatgaga	6660
gcacaggcag	tcagtttctg	tcagtttctg	gagcatctgt	gaaggctcct	atgaagcaat	6720
gttgtcgaac	ctgagacatg	agggaggaat	gggagttcac	cagaccacag	gggctaaaag	6780
aaatgtccta	agtagaaaca	tcaaaggcaa	ggcactcaat	aaggtgtgat	gactcaagtt	6840
gagttaaatt	atccttctgt	aaaatcacaa	gaaagtagac	caaaccctgg	ggcatctaga	6900
gttgcatttt	atgactctgt	tatgttaaatt	aactatgtca	ttattttttc	tatatatttt	6960
catgtagaaa	tacttgaaat	gaacatcatt	tttgacataa	tagtcactgt	agctggggat	7020
aaactaaatc	cttgtaaact	cctatccagt	tgaaaatgtc	attccttgcc	gggcacgtgg	7080
ctcacgcctg	taatcccagc	actttgggag	gccgaggcag	gcagatcacc	tgaggtcaga	7140
aattcaagac	cagcctggcc	aacatggcaa	aatgctgtct	ctactaaaaa	tgcaaaaatt	7200
agccgggcat	ggtggcggat	gcctgtaacc	ccagctactc	gggaggctga	ggcaggataa	7260
ttgcttgaac	ctgggagcca	gaggttacag	tgagccgaga	ttgtaccatt	gcactccagt	7320
ctgggcaaca	gagcaagatt	ctgtctcaat	aaataaataa	ataaataaat	aaataaataa	7380
ataaataaat	aaaaaagaaa	atgtcattct	ttctcatgta	ttttccagat	taaggatgct	7440
caactgcaaa	atgctcgggtg	tgtcctgcaa	attgataatg	ctaaactggc	tgctgaggac	7500
ttcagactga	agtaggttcc	ctaatacgtg	gcaaaagttt	ctgaaaaaga	attccttttag	7560
tagtccttcc	agatactcag	ctttccatat	cattgttgat	aaaggaagca	cggttcaatg	7620
tccagaatcc	tgaagcctaa	aggaggttag	aagctacatg	tatgaagcta	accagcact	7680
cagggatggc	cttctctttc	ttgatcccc	ggcatgtaac	taaacacctc	cagtaactac	7740
tattctcctt	ggttattact	ggttgctaaa	ttttttttta	gtaacctggg	atctaaccct	7800
aattctgccc	tttgagagtaa	taacaaagta	atttacaatt	ctccttctcc	ctaagtgcct	7860
ttctgttata	taaagagagt	cttgtgtcta	cccttggtga	ttctccaagt	aattctccac	7920

gttcattcaa	gtgcctgcaa	gtgtatgacc	caagttccag	gggtgactct	tgatgatttc	7980
tggcttgcca	gtgtttttaca	ggatgggtctg	gccaacccaaa	gaaccaggac	caatctataa	8040
taattagctg	gcgtgatgcc	gtatgtctgt	aatcccagct	actccggagg	ctgaggcagg	8100
agaatcgctt	gaacctggga	ggcggagggt	tcagtgagct	gagatcgtgc	cattgcactg	8160
caacctgggg	ggcagactga	gaccttgtct	caaaaaaaa	aaaaaggaag	aaagaaaaga	8220
aagaaaaaga	aagtaaaaaat	tgtgtttcact	ttctttgtag	tcacacacc	acatgtgacc	8280
agacctgttc	cttgcaaaaa	gcttccacac	taaggcctct	tcaccttgaa	tttgtacaat	8340
gcattaacac	caaaaagccc	tttgtgggta	gaagggtagc	cttttaaatgc	tccaagggat	8400
taacaagaag	gaaataggaa	atcaaatcca	aagatgaaag	cagtaaagggt	gcattacttc	8460
caattttacc	tagcactgag	tgtcacattg	cagtgctcatt	ttttaaaagt	ggatatttta	8520
ggaaactggg	cagggcatgc	atgatcgtaa	cgctgtaat	cccagcactt	tgagaggctg	8580
aggcaggagg	ctcacttgag	tcctggaggt	tgagaacagc	ttgggcaacg	tggcaaaaacc	8640
acatctctat	acaaaaatac	aaaaaaaatt	agctgggcat	ggtggcatac	atctcgtgtc	8700
ccagctactt	gggaggtctga	ggtgagagga	ttgcttgagc	cccaaagggt	gaggctgcag	8760
tgagccatga	tcacaccatt	gtactccagc	ctgagtgaca	gagtgggacc	ctgtctcaaa	8820
tacacacaca	cacacacaca	cacacaccac	acacagtggt	tatgtaagat	tgtagaggag	8880
gatgtagagc	tgtttgagat	aattcacttt	ggatgtctct	gttcacaaaag	taataaaaaat	8940
aaatcgatca	tgtacattca	ttaagtaaaa	ctaaccatta	tttaatatca	ataataagaa	9000
ccctttgcca	acacaataat	taacacaatt	taattttctta	taagataaat	tctagaatttt	9060
agaagtgttc	aaaattatttt	cagattgcct	ttttaccagt	caccccaaatt	tatagagatt	9120
atattattga	gcacattttc	tgactcctag	gttcttatgt	aaatttcatg	atttgtgtaaa	9180
ggcagacatt	ataaagtatt	gaaattgatc	tcctcataag	ccacatttaa	aaacctatcc	9240
cattatatta	gattctctcc	ttataatggc	ttcagaagga	ccagttatct	ctgtacacta	9300
attaattcac	aggatatgaga	ctgagagagg	aatacgtcta	acagtggaag	ctgatctcca	9360
aggcctgaat	aaggtctttg	atgacctaac	cctacataaa	acagatttgg	agattcaaat	9420
tgaagaactg	aataaagacc	tagctctcct	caaaaaggag	catcaggagg	tgagaaaata	9480
ttcagaagtg	gtattggaaa	caatggaatg	gttctatata	atactaataa	taggaggagc	9540
gggagaaaca	ggagaagggg	gaagagttgg	tggtgatagt	gacagagatg	atgacgatga	9600
caataatgat	acaagcccta	ccttcttttc	ataatgttgt	tgtaagttaa	atgacttaga	9660
gcagcacctg	gaccacaata	agcccaacac	aagttattat	tttatatctt	ttttacttat	9720
tcccaatgaa	agaggtcatg	agactcctta	tgtcttttct	gcccagcctt	atctgagaat	9780
gtgcttcaga	ctaaaatcaa	tcagaaaattt	cactttcata	ggaagtcgat	ggcctacaca	9840
agcatctggg	caacactgtc	aatgtggagg	ttgatgctgc	tccaggcctg	aaccttggcg	9900
tcacatgaa	tgaaatgagg	cagaagtatg	aagtcatggc	ccagaagaac	cttcaaggag	9960
ccaaagaaca	gtttgagaga	caggtaacca	cacaattcta	aagggtgagc	aaacgtgtag	10020
atgctttcct	ccagaaacag	ataactcatt	ttctttttca	tttgttcatt	cttcctttct	10080
ctttctgtct	tttcttttct	atttccaccc	ctcaactatt	tttttttcac	tcttggcact	10140
gtagactgca	gttctgcagc	aacaggtcac	agtgaatact	gaagaattaa	aagggaactga	10200
ggttcaacta	acggagctga	gacgcacctc	ccagagcctt	gagatagaac	tccagtccca	10260
tctcagcatg	gtaaagcata	tctaacttct	cttttcta	ctagtatgtg	tttaccagg	10320
tcctctgtta	ggaactatag	aaatgcaaaag	acctacaaga	aataaccctt	ccccttgcag	10380
aactggcagg	gaaacaggcc	gaacaaactga	ttataattaa	aggacagaga	gaaatcgagg	10440
aaagggcaat	gtactgcatg	aatgcagagg	aaagagtaaa	tctggaagat	ttcacaggga	10500
aagtggcatt	taaaccagat	ctttttgtaa	cttttaagtt	caggagtaca	tgtgcagatt	10560
tatgatgtag	ttaaacttgt	gtcatgggga	tttgtgttac	aggttatttc	atcactcagg	10620
tattaaacct	aatacccatt	ggttattttt	cctgatcctc	tccctcctcc	taccctccac	10680
cctctgttag	gcccccatgt	ctgctattcc	cctgtatgta	tccattatac	cagatctcaa	10740
aatctaagat	aaaattttta	gatggagaat	ggactagaga	cattccaggc	caagcaaatc	10800
agcaagccca	tgacaaatta	tgttgtggtta	agcagaatcc	ctcaaaccac	agtggcctgc	10860
agccatgata	ctacatccac	cgtgacattt	cctttccaag	ggcaaggcta	aaggggtagg	10920
ccctacctag	gacatgccag	tgtcctggca	gaaagaaaag	agcaatgggt	ggtccacttg	10980
atagctctta	aagcttctcc	ttagaaaagg	catttgtcct	ttgggaggcc	aaggcaggag	11040
gatcatttga	ggtcaggagg	ttgagaccag	ctggccaata	tggtgaaacc	ccatctctac	11100
taaagataca	aaaataagct	gggcatgggt	gtgtgtgcct	gtaatcccag	ctacttgagg	11160
ggttgaggca	ggagaatcgc	ttgaacccag	gaggcagagg	ttgcagttag	ctgtgatcac	11220
attactgcac	tccagcctgg	gcgacagagc	aagactccgt	ccccaaaaaa	aaaaagaaaa	11280
agaaaaggca	tttgtcagtt	tgacctgcat	tttattaacc	aaagagagtc	acatgacca	11340
gccaggtgtc	aatggattaa	aggaatctaa	tcctgcaatt	gagaaatgcc	acagatcaca	11400
tggccaggtc	tgatgaagga	gtgagaggtta	taacatcttc	acacagtggt	gaagacaagta	11460
ctgagaacaa	tgctacaatg	cgccgcactg	aaagaacagt	aggtgcaaag	ctacaagcaa	11520
agaaaaaacc	caagagctaa	tgatcctagc	tggctggctg	aggttgcccta	ggttgggaaga	11580

gtgggagatg	gagctagaaa	tatacaccat	gcccacagt	atgaactgca	gagacccttc	11640
tcaaaggaaa	ttaaaattaa	cccatctctt	gaatcaagtc	ctcacataag	aagtgcccta	11700
tttttcttgt	gctcatagaa	agagtccttg	gagcacactc	tagaggagac	caaggcccg	11760
tacagcagcc	agttagccaa	cctccagtcg	ctgttgagct	ctctggaggc	ccaactgatg	11820
cagattcgga	gtaacatgga	acgccagaac	aacgaatacc	atatccttct	tgacataaag	11880
actcgacttg	aacaggaaat	tgctacttac	cgccgccttc	tggaaggaga	agacgtaaa	11940
taaggctctt	agaatcaagg	aataggtgtc	aatatctgta	tgcaacttcta	ttttaatgtc	12000
cctgtcactc	attaccacag	accaatgcaa	tccttaggac	agaagcaatt	atactcacac	12060
atgcctcacc	acgaacaaca	aaacgaaaat	ataccaaaaa	atacacacac	gcccataata	12120
tcaagtacag	ccttgagatc	atgtggtagg	actgagttct	accacatgat	catttgagga	12180
taattctcca	aatgatatag	attatgctga	tattaatttt	catcattaat	atataattga	12240
aggcataata	accttttgga	aattctaatt	gagagctcat	gaattagaca	ataagctgct	12300
gaggtccacg	ggagccagtc	tgagaatcac	aagtgtggca	gcagcaactg	tcttcagata	12360
ccatacctaa	gaatatcaac	aagagaacac	aagatttaaa	cttccattgt	aattttgtta	12420
ttttaattag	aggaacttct	tagcatatat	taaactggtc	agtttttaaa	ctatgtatatt	12480
ttcaagttaa	aaagtaaaat	gctcaagttt	gcaataaaa	caatgtaaaa	gggaaagata	12540
tatgaaagca	ataacacatt	cacttggaact	ttgaaatata	aaagacagga	gtgcattcca	12600
ttttcaaaac	agcaataatg	cttttttctg	tttctttttt	cttcttttca	ttaaaaaaa	12660
aaacagaact	acagaatatc	agttaagcac	cctggaagag	agaggtaagt	tctaaatttt	12720
tgacattttt	ctatgacatt	cagctgcttt	ctattaacta	catgccactg	ataaaaagta	12780
aagtggagct	gttttagtct	gttttctgct	gctgtgacag	aatacctgag	actggataat	12840
ttacaacaa	tagacgttta	cttggtcac	agttctggag	gccagaaa	ccaatatcaa	12900
ggtgccggca	tcttgtaagg	gccttcttgc	gtgtcatcc	catggcagaa	agtagaagt	12960
caaaagagtg	tccatgagaa	ccagagagca	agaggaggct	aatctttctt	ttagaactag	13020
cccactctca	caataactaa	cccattatca	tggttaaccac	attaatccat	ccatgagaga	13080
agagccctca	tcatctaata	accttttact	aggccgcacc	tcccaacact	gttacattgg	13140
ggattaagtt	ttccacacat	gaactccagg	gaacacattc	aaaccatagc	aaaggccaat	13200
tctcaaggga	gcagatatga	caccagggat	tctaaaaatc	ttgtacatgg	cataaagaaa	13260
cctccacat	gggaacttgg	gcacactcct	cagaatgggg	tgattttctt	ggcctgtgct	13320
attgctatct	tgaaacatcc	tgacatcctg	aaaaggaaaa	acaagacaaa	atttgaattc	13380
cacttaaat	caagataatt	tatttcttga	atttttaaga	gtaggacatt	tgtaaatttg	13440
gggagaagca	cattttctgc	atctatttta	aaaatggact	taagattttt	tgagaagag	13500
gatgggttta	acataatttt	ctaaaagaag	gaaataagta	aaaagaataa	taatttaaa	13560
ttgaataata	taaatcgaca	gagtcatgtg	cctgaattaa	cattttaatgt	ttaatatgaa	13620
ttcagatata	aagaaaacca	ggaagattaa	gacagtcgtg	caagaagtag	tgatgggcaa	13680
ggtcgtgtca	tctgaagtca	aagaggtgga	agaaaatatc	taaatagcta	ccagaaggag	13740
atgctgctga	ggttttgaaa	gaaatttggc	tataatctta	tctttgctcc	ctgcaagaaa	13800
tcagccataa	gaaagcacta	ttaatactct	gcagtgatta	gaaggggtgg	ggtggcgagg	13860
atcctattta	tcagactctg	taattgaata	taaatgtttt	actcagagga	gctgcaaatt	13920
gcctgcaaaa	atgaaatcca	gtgagcacta	gaatttttaa	aacatcatta	ctgccatctt	13980
tatcatgaag	cacatcaatt	acaagctgta	gaccacctaa	tatcaatttg	taggtaatgt	14040
tcctgaaaat	tgcaatacat	ttcaattata	ctaaacctca	caaagtagag	gaatccatgt	14100
aaattgcaaa	taaaccactt	tctaattttt	tctgttttct	gaattgtaaa	accccttttg	14160
ggagtccctg	gtttcttatt	gagccaattt	ctgggttaat	cttattgatt	tttcagcatc	14220
agtacaactc	tacaaccttt	gagctatatc	tgctttttcc	cattgcttcc	actgcctttt	14280
aaaactcaac	acagcttttt	gaataatttg	agagtcaaat	tcaatcacaa	atgctgagac	14340
gaataagagt	gaagtacact	atacttaaaa	tggaaataga	ttaaaaacaa	cattactgaa	14400
acccttcgca	aggcaaaatg	tgtctccttt	tgataataag	ctgcatatac	tatcaggtcc	14460
tctctttctt	tatatgttga	acatatattt	ttaatgaaat	gtctctcatt	tttttaataa	14520
cagattttatt	gagatataat	tcacacacca	tgaatttcac	ccttacaaaa	cgtacaattc	14580
agtggctctc	agtatgctta	caatgttttg	caaccatcac	cactatctag	ttttagaaca	14640
cttcatcacc	ccaaaaggaa	atcttgtaac	tattagtagt	caccgccttt	tcccttcctc	14700
ccagccccta	acaaccacta	atctacttcc	tgtctctacg	gatttgccct	ctctggacat	14760
ttcatataaa	taggttaata	cgatgtgtcc	ttttatacac	aaatgttcat	agcagcatta	14820
ctcataaaa	cccaaagcg	aaacacctca	agtgtccatc	aaccgatgaa	tgataaaca	14880
aaatataata	tatccacaca	atagaatctt	attcgtcaat	aaaaaggaat	gaagtactga	14940
tacatgctat	aacagagatg	aacttcgaaa	acatgctaag	tgaaagaagc	caaatccaaa	15000
aacaataaaa	acacatattg	tatcctcacc	ctttttgcat	tttagtgagc	aatcattgca	15060
tatgaatggt	tatgggaaaa	atcaatgtgt	gctaaatcat	tgtattccag	taaatagatt	15120
ggacttaaaa	cttgatacag	aagttgcaaa	taagtgggat	tgagtttgat	tattatagat	15180
aaaataatta	catgattcat	ttaagaataa	taatatccac	catttattga	gcacttacta	15240

tgagcctgtg	tgccaaacat	ttcatgcatt	tctcatttaa	ttctcacaat	aatcctgtga	15300
ggtagaagct	attaggttga	atcatatgaa	cttgccaata	tatgataatt	tctaagaggt	15360
gggaattttt	gaggatgtga	atggtaccac	tttgaattcc	taagatgtaa	tataatatct	15420
aacacatagc	aggcacttga	ttcattattt	taaattgaaa	gaataaaagt	ttttaagctt	15480
tccaatatat	gataatttct	gacttttcaga	aatagcaatt	ttatatgcta	ttatatagca	15540
tatataataa	ggttcagcct	tattatgtta	ccccactttt	acatatgagg	ataaatgagg	15600
actcatatga	agacatgaga	taaagacttt	cccaaagtca	agcagttacc	aagtagtaga	15660
gcgagactga	acctcagcgc	tgttttctcta	aaaccaggac	accctcataa	gcaactaatt	15720
acataacaaa	gcaatacatg	attcacagtt	gaaataggca	cttgctatcc	gcagttattt	15780
tgttgttttc	taattgtcat	tttcatcagc	cagacacaac	agccaattgt	ggcaaagtgc	15840
cagctttggc	tcgtaacatc	acacatgact	tgattcagta	caacttttgt	cagaaaaggt	15900
attctcacct	attctcattg	ccttcttttc	caaagtgaag	agatttcact	catttttttc	15960
ttaattttct	tccaagtcac	gctagctagt	aagttgcatt	taaagatgtt	aagaatatatt	16020
aaaagtgaat	tctttttcac	ctactgagtc	acattccaga	atagtctgaa	actttgacat	16080
gcaaatacca	gactgtgaat	ctgattaata	agaaacctat	gcagatgggt	ttgtaactga	16140
ttaggcctga	ccactgttat	atggcaatga	tgacactgtg	ttaaaagagg	taggattgtt	16200
attcttaatt	taggatggtc	ctcttttaac	tacctgttaa	aagaagtaga	attgttattt	16260
ttagatcaga	aaaatgaaga	ttttttcttc	ctcttgcttc	tttggtctgt	ctctagtttc	16320
ttccaagcaa	tctttcaaa	aagtgagtga	gagctacata	catgtggacc	agatgggtga	16380
gttctacctc	cagttctgcc	agcagttact	gtgtgaaagt	gaagcattaa	tctttgtatc	16440
tatctatatt	tctgatatga	gctaagaact	agaatgacat	aatcctattt	ctgacaggta	16500
aacagatcca	gagagaagtc	tttatcacac	attagaatta	tcatcaatgt	attttttcat	16560
tttatatgaa	attgtcagtg	cagaagtga	gctatcaaac	tcagagagag	cccctagagg	16620
tgaggttagg	atggaaataa	ctattttttc	tgagctctgg	agattatttc	taccagagt	16680
tctgaatcat	ctaaaaagga	gaatgacatg	gagtgatata	aaatcaaaac	atggccagtg	16740
acctcctcag	acactctggt	ctcatccaca	tgcacagga	tcagcctcag	gtacctgatt	16800
agaccccaaa	gtaacaattc	caacttaaag	cattagtagt	gattttttatt	tttgaattct	16860
ctttcaaaaca	tctctgtttt	ctctccccta	ggctcatttc	caagattcct	ctcatcaggg	16920
tattatttta	tcatcttctt	gtctcctacc	actttcaaaa	ttctcccctg	ctttcaagaa	16980
ccattgatct	ctggagccca	gaagtcaatc	tcactcatac	cccttaggtc	cttgtttaac	17040
cctcatctca	aaagcacaat	acataaaaatg	taggcaaccc	aaaattctct	cagtcactca	17100
caggatttta	taatgtttatc	caaagtga	gatgttacag	atcaagggat	cagcgagttg	17160
cagaaaatga	caggtctgtc	ttacgggaaa	aaactcaggt	agaaaaccct	gcaaagacca	17220
ggacagaaac	caacctgaca	tgaaaagatg	agggtatgat	ttactcaata	aaaatctaaa	17280
gacttgtaaa	aaccacataa	ctaattttct	ctattttgaa	catttctctaa	actctacaaa	17340
aatggaagat	ataattcttt	tgaacagttt	gccctggcta	taatcatttt	cctctctgcc	17400
tcaacttatg	caatcactct	gccaacaagc	ccaagattgt	ttattgtttt	ttacatcacc	17460
actgccttat	gcattaatgt	ggctgtcaaa	gaaaattatt	ttcacttcta	aaacctctaa	17520
agcagagtct	tgattattta	acttagcctc	ccacttaaaa	aaaaaaaagc	cactgaagaa	17580
gaaatatttc	ccttttcaac	ttctgaagtt	gtcctccatt	cataactgaa	ttcagaataa	17640
atattgggtca	aagcatacca	gtaaattagg	gcacagtcac	tttcaaataa	aatgaatttc	17700
aaatgacaca	ttcaaacaca	ttaagactta	acttctttca	aatgaaatca	ttcaaggagt	17760
gcagtgataa	agttcagcga	aacactaggc	taggactcag	gataaaaaat	aaattagatg	17820
tagtacctac	ctaacaagct	tagtctagga	taatatgtta	tatgtataga	aacataaaca	17880
aataatatat	aaacataatt	tttagagatt	gagcaatatt	atttaaattt	taccataggc	17940
attagagttg	gaaagtgtac	ctttcagcac	aaaatcaatt	ccaagttcaa	aaattcaact	18000
taatcatatt	cccgtattat	gtgatcgagt	cgactccctt	tagtgagggt	taattgagct	18060
c						18061

<210> 116
 <211> 1404
 <212> DNA
 <213> Homo sapiens

<220>
 <223> zygin 2, zygin II; fasciculation and elongation protein
 zeta 2 (FEZ2); pre-T/NK cell associated protein (3CL,
 HUM3CL); similar to C. elegans UNC-76

<400> 116
 ctcaagagggt ctagtaccgg cagttatgaa gagagagtga aaaggctctc agtgtctgag 60

```

ttaaataaaa tccctggaaga aattgagact gccattaagg agtactctga ggagctgggtg 120
cagcagttgg ctttacgaga tgaactggag tttgaaaagg aagtgaataa cagcttttatt 180
tctgttctta ttgaagtgc aaacaaacag aaagagcaca aagaaacagc aaaaaagaaa 240
aagaaactaa aaaatggcag ctctcagaat aaaaaaaacg ggaagaagtca tatgcccggc 300
acataatttga ctacagtcac tccttatgag aaaaaaaacg gaccaccgtc tgttgaagat 360
cttcaaataa taacaaaaat tcttcgtgcc atgaaggagg acagtgaata agttccgagc 420
ttgttaactg attatatctt gaaagttctg tgcctacat agagcagcaa ctttatctgc 480
gggtgggctcc aagctagatt tccgacagca ttattctgag agctggctac cattaccctt 540
cttgctattg gaaactcagc acatttgaac ttgggtttga ttcagtatta acagatcttg 600
actacactaa ttctttatat tatagaacca acggaaatat gggcactatt ttgaattcta 660
gagatggttt ttgttaaact tactaataaa ctgttctctt agtagattaa gagagagtaa 720
tattaattgt gcatgtgcag ttgtatttct cattaactga cagtatgccc atttgttttt 780
atggctttct tatctaaact gcaactgatg actagattaa agccttggga gatttatact 840
ataaattcag tgatggcaag aaccaacact gtttttttgg gagaattgtc agtgaacta 900
ttacctacca gtattgttca gagagattga aacagaataa acgggctgtt cttgaagaag 960
caaaaccaga atatgcatta ctttggttta atacttagtg ctaacattga aactgttggg 1020
gggtgatgat tttgtagctt gctgcttgtt tcaccactgg tcaaatttta accattaaat 1080
tgccattcac ttttagaatc ttgtatttaa gtaagttttg attttcaa atgtctgctt 1140
atgtgtctgt gaagaattgt acttttttaa aagtgtgtgt cctctgaggt gcttgagaaa 1200
gtgtacactg cagaactgcc cattctcatt actgtgtcct attttattca tgcctgtgtg 1260
tttttcttaa gtatgaattc tagatacagc tacttatgga ttcatacaata tcatgagcac 1320
ttttgctggg tccagtcaaa tcaatggcat ttaataaatt ttttaagaag taaaaaaaaa 1380
aaaaaaaaaa ttcctgcgag cgcg 1404

```

<210> 117
 <211> 820
 <212> DNA
 <213> Homo sapiens

<220>
 <223> actin related protein 2/3 complex, subunit 4 (20kD) (ARPC4);
 Arp2/3 protein complex 20 kD subunit (p20-Arc); EST clone
 Id number 187446

```

<400> 117
cagccagcgc ccgcgatgac tgccactctc cgcccctacc tgagtgccgt gcgggccaca 60
ttgcaggctg ccctctgcct ggagaacttc tcctcccagg ttgtggaacg acacaacaag 120
ccggaagtgg aagtcaggag tagcaaagag ctctgtttac aacctgtgac catcagcagg 180
aatgagaagg aaaaggttct gattgagggc tccatcaact ctgtccgggt cagcattgct 240
gtgaaacagg ctgatgatag cgagaagatt ttgtgccaca agttcatgag cttcatgatg 300
atgcgagcag agaacttctt tctccttcga aggaagcctg tggaggggta tgatatcagc 360
tttctgatca ccaacttcca cacagagcag atgtacaaac acaagttggg ggaacttttg 420
atccacttca tggaggagat tgacaaggag atcagtgaga tgaagctgtc agtcaatgcc 480
cgtgcccgcg ttgtggctga agagtctcct aagaattttt aaaccatctg gctggatctc 540
gtggccttcc ccctcagact acccatgtct ccacgaaggc gtcttgaggt cactccccga 600
gcagcgcggc ggcggcaggg agttgggttg ggggtggcat ttgatgcggg aggtgggtgg 660
tgtgcttgct agctgggcaa gaaagcagca gtggacctgc cccaaggcca cacgtgcctg 720
gtcaggctgg cttctgatgt tcagtccctt gggccgggac agattttttt taacgtcttg 780
aaacttaaac tctgtgcttg taaaaaaaaa aaaaaaaaaa 820

```

<210> 118
 <211> 2552
 <212> DNA
 <213> Homo sapiens

<220>
 <223> paralemmin (PALM); KIAA0270

```

<400> 118
cagcacctga agtccaaggc actgcgggag cgctggctgc tggaggggac gccgtcctcg 60
gcctcagagg gggatgagga cctgaggagg cagatgcagg acgacgagca gaagacacgg 120

```

ctgctggagg	actcgggtgtc	caggttggag	aaggaaattg	aggtgctgga	gcgtggagac	180
tccgccccag	ccactgccaa	ggagaacgcg	gcggccccga	gccagtcgg	ggccccagcc	240
ccgagtcacg	ccaaggagga	gcgcaagaca	gaggtggtga	tgaattcaca	gcagacgccg	300
gtggggcacgc	ccaaagacaa	gcgagtctcc	aacacgcccc	tgaggacggt	tgacggctcc	360
cccatgatga	aggcagccat	gtactcgggt	gagatcactg	tggagaagga	caaggtgaca	420
ggggagacca	gggtgctgtc	cagcaccacg	ctgctccctc	ggcagccgct	ccctctgggc	480
atcaaagtct	acgaggacga	gaccaaagtg	gtccatgctg	tggacggcac	cgccgagaac	540
gggatccacc	ccctgagctc	ctccgaggtg	gacgaactca	tccacaaagc	ggacgaggtc	600
acgctgagcg	aggcagggtc	cacggccggg	gcggcagaga	cccggggggc	tgtggagggg	660
gcagcccggg	ccacgccctc	ccggcgggag	atcaccggtg	tgcaggcaca	gccaggcgag	720
gccacgtccg	gcccgcgggg	gatccagccc	ggccaggagc	ccccggtcac	aatgatcttc	780
atgggttacc	agaacgtgga	ggatgaggcc	gagaccaaga	aggtgctggg	ccttcaagat	840
accatcacgc	cggagctggg	ggtcatcgaa	gacgcggctg	agcccaagga	gcctgcacca	900
cccaacggcg	gtgctgccga	gcctcccacg	gaggccgcct	ccagggaaga	gaatcaggcg	960
gggcccaggg	ccaccaccag	cgacccccag	gacctcgaca	tgaagaagca	ccgttgtaaa	1020
tgctgctcca	tcatgtgagc	cgccccccga	gacccccggc	cccacccccac	accacagaca	1080
cccaccagcc	cggcccctcc	cggcgcctgc	ccaccctcca	cccacagcct	cacgggtcca	1140
ggacttggcg	tggtgttaca	tggtccttcc	gagttttctt	tcgctggaaa	gagggacagg	1200
ggccccccacc	cgtcaccacg	ccccaacact	ccccccgaac	cagagccgtg	cacttgtgcc	1260
tggtaggaga	gagacaggac	agaccgcctt	ttcccagagc	aaggaccccc	catgtcacgg	1320
cagcttcaca	gacgcggctc	gcgcccaccg	gggtcctggc	gggtgggacc	cgcagcctcc	1380
acgcggccca	ggccagcctg	ccaccctctg	ggcctcctac	ctgtgccttt	ctctgagggg	1440
acaccccggc	agagagggcc	ccgggagccg	ggggtgggta	ctgaggcctg	ctcagggcct	1500
ggaagtgagg	ctctatgggg	ttccctggcc	aaggcgctgg	ccccccaatc	tcaggcagtt	1560
ggggtgaggc	cgtgcctctt	tgggggctaa	aggtcttggg	tggaggacag	gcccctctgc	1620
tgtgccccta	tgcctgtgtg	gggcccaccc	agtggacaat	ggagtctggg	ggagggggaa	1680
ccccggggac	atgccccac	ccgggagggg	ccggtaaccc	ctgggctatc	ttctagacgg	1740
ggcgaaccag	gggtcattga	cctgccccct	gcacagggca	gggaccgagt	gagccactcc	1800
ttgtcccag	ctcccgcctc	cactggggcc	tccttccctc	tggtgctaag	ttggggaccc	1860
cagggggcgc	ccccggcctc	ttctccatcc	tgcttggaac	agggctcctg	gtcttcccaa	1920
ccataccccg	agatcaggcc	ccacctgcca	gctctactgg	gcttgagaca	cgccggggca	1980
gtggaggggg	ggacacagcc	tgggacagga	agcctcttgg	gttgagagcag	gagaccctca	2040
tttgccaccc	agaccaatgt	gagcctgccc	ccagccccct	ctcattggaa	gtggcaaggg	2100
gcttccctcc	tgggggcagc	tacactcgtc	cccagaggca	cattcgtgca	cattctcaca	2160
gacaccgtct	cacacgttgg	ctttggacaa	ccaggcccca	acttgggtccc	tgccctaggg	2220
acctccagcc	tgggtgccag	tgctcaggcc	acctcctggg	ccagtcacca	cctgcagcct	2280
cggcagggca	ggtacagggg	ccacctcgga	tgggagcctg	ggtcacctgcc	tccgctctgc	2340
ccctgggtgg	ctgggaggag	aggccctctc	gggggtgacc	tgggcgtcag	ccgtggaacc	2400
ccctcctcct	ccctggagtc	tgctgagtc	cctcgagccg	cgagccttcg	ctgaagtgcc	2460
cttgctataa	ccccctctgc	ttctggtgtg	tgacgaggcc	cccgatgttc	ttgattttcc	2520
cagagaagca	aataaacagc	gtgaacagcc	cc			2552

<210> 119

<211> 105

<212> DNA

<213> Homo sapiens

<220>

<223> esterase D (ESD); esterase 10; S-formylglutathione
hydrolase (FGH)

<400> 119

ccttttactt	cggcccgttt	cttctgggtca	ctccgccacc	gtagaatcgc	ctaccatttg	60
gtgcaagcaa	aaagcaatca	gcaattggac	aggaaaagaa	tggca		105

<210> 120

<211> 4656

<212> DNA

<213> Homo sapiens

<220>

<223> aldolase B (ALDOB, ALDB); aldolase 2,
fructose-bisphosphatase; fructose-1,6-bisphosphate
aldolase; fructose-1,6-bisphosphate
triosephosphate lyase B

<400> 120

```
ggccagttta gttgtgctca gtggctatgg attgcaacac attggtctaa tgaggcctgg 60
agattgggttc agaagctttt gccaaagcaac aaataagaat tccttcatcc tgccctccctg 120
cagtgtaaat gtgccaaaggc caagtggctc tatgactagc tttgagtttc acctgggtggg 180
acctcttgtc cttcagggtcc tcgctgctgt ctacaaggcc ctgaatgacc atcatgttta 240
cctggaggggc accctgctaa agcccaacat ggtgactgct ggacatgcct gcaccaagaa 300
gtatactcca gaacaagtag ctatggccac cgtaacagct ctccaccgta ctgttcctgc 360
agctgttcct ggtaaggcct tctttcttct ctaactcaag gtcttagccc tcattctttg 420
gagagccaca agctttctgt ttgtccagaa atctgcttct attcatgaaa caaacctctg 480
ttatctcaca ggcagccagc acttcttctc ccacttcaga ataccaagca tcccaagtct 540
gcccaaagtc ccacaatcca tgtatttctt caacatttca ctgccttcct tacgtattta 600
aagcacttat ctctagccca actagcttca gcaaaagcaa actgatttct cagtttgctt 660
taaggcaaat taagcagaga aaagactgag acattacttt tctggtaggc tcattgcttg 720
ctttctcaag cagggtatat aagggtggac taatagagt aaatggcctt ctctcctacc 780
aggcatctgc tttttgtctg gtggcatgag tgaagaggat gccactctca acctcaatgc 840
tatcaacctt tgccctctac caaagccctg gaaactaagt ttctcttatg gacggggccct 900
gcaggccagt gcaactggctg cctggggctg caaggctgca aacaaggagg caaccaggga 960
ggcttttatg aagcgggcca tggtaagatg ctgccacctc ttatctactt gatgatgttc 1020
acatttgagg cttgactttc caacacggag aagcattgtt ttcttcgggc caagaaggta 1080
tctaccaata gtgtctatta ggcatttgaa aatgtggcag tagaggtcag tatgaggatt 1140
gaggctagag agaattttga attatccaca cttagagtata gttgatgaca ggagactgaa 1200
ggacaatttc aacagaaaca cttcagaggg aaggagataa gaggaccaag aactgaacct 1260
aggatacttt ttattttggg aagatgaaga agagaagcaa ccaagaaaag cagcgattat 1320
attgtagggg gaaccaagca ttctgggaat aaagacagaa gaatttcttt ctttcatggt 1380
tattgttttg tttgtttgtt tgttttgaga tggagtgtta ctctgtcacc caggctggag 1440
tacagtggca caatctcggc tcactgcaac ctccacctcc tggattcaag caattcttct 1500
gcctcagcct cccaagtagc tgggactaga ggcattgcgc accataacct gctaatttct 1560
gtatatttta gtaaagatgg ggtttcacca tgttggccag gctgggtctca aactcctgac 1620
ctcagggtgat ctgcccacct caacctccca aagtgtgag attacagaca tgagccacca 1680
caccagccgg gtaaacaatt tcaaagggcc aataataaca tgctatagag agattcaaaa 1740
gaaaggccaa gaaaagacct tgagattggc atttaggagc ataccagtga ccctcactga 1800
aacagtttca ataaagagga aaggaaaggc gccactcaa gaagtttttc agaaaaagac 1860
ccagaaaagg tgccaggaga aatgaggacc aacaaagttt ttattcaaat aataaccaa 1920
atttttaaaa tacgctttat gagccaaaga ctggggtgaa caaatgagac atagccatgt 1980
cctccaggaa gcttggagtt tagccaaata ggagagact tggcatgttt aaatgtaaag 2040
aaagaggagc cagaggagac agtaaagatg aggagattgg ggataattga gtggagaaga 2100
acttagagga gcaggactgc atgagactca atattaagca taggtggcac agctgggtga 2160
agacaaaaag gaggaagag gcagaaaaga gaatacagtt ggaatcagct ctatataagt 2220
caagagatgt agcagttgat gactgattac agttgagggt atctgctgag aatgatgaag 2280
aaatggaaat ttcaatactg acagtoggaa agcgtagaaa agcagttaaa ggaacttgct 2340
aggaaattga tcggacgtta tggccagaca tagccaagca tcaggtaatg tgcagctgaa 2400
ataagagtga gtgtgtggtt gcttcattcc tgagttttcc taacagcagt ctaaagcatg 2460
caggaagatt cagaacgcaa aatagcgggg tagaagagt aaagtttaat aggaagatag 2520
aagagtgaca aattttaccg atagcctctg ttagcttgct gaccatagag gaagctaggc 2580
aaggaatcaa gagtagtcag aagtgtggtg atgaggccct aaaggggaagg aaggccccag 2640
ggaagctaaa tcatcatctc acaggcataa gagaggatc agattttcaa agtagtgctt 2700
taccttgact gtggaaagca ggggtgcagc gtgctgctgt gtggctgatg gactgaggag 2760
acctagctta catgatggag ggattgtgaa agcgcaggct atcagggaca tccacacaga 2820
agaagggaag ctgagtttat catcaagaat ggtgcttccc aagctccagt gtggatctga 2880
atcacctgaa ggtgattttg gttttgttgt tatgatcttt tatatttaca cacaataatt 2940
gtatagatct gtggggatc tgtgattttt tatatatgca tataatgtat aatgatcaaa 3000
tcaggataat tagggatttc actccaaata tttattattt ctttgggttt ggaacattcc 3060
aaatcttctc ttccagctat tttaaaatat gtaataaact attgttaact atagctatct 3120
tactgttgta tcaaacacta gaacttatcc cttctgccta actgtatttt tgtaccatt 3180
accaacctct tttcatttcc cctaccccca cttgaagcgc ttgttaaaaa tgcagattat 3240
```


gggtctcacc	cactgagttt	ctaattcagt	aggtcagggg	taaggccagg	gaatttctat	3300
ttttaacatg	ttcctaaggg	atgctggtag	accatgaaac	acagttggag	aaccattgat	3360
gtaaaatgta	gaaataagtc	ctggagagaa	cagacaatag	caacactgac	tggaagaagt	3420
ggtagccactg	agtgcatttc	aaatattgtc	gtaagtttca	taattctgaa	tttatcttta	3480
actggaatgt	atacaggaaa	gcaaatgata	ctacaataac	taaataaaaa	ttacatattc	3540
ttctagacca	atataggtag	aaaatggaaa	tgtttttaaa	ataaacatgt	ttttcttttg	3600
gtatagtgtg	ctatactagt	gagaaatttt	tcaactttag	tttctagtac	tggtgctgca	3660
atattgttgg	tactgaacag	agatttcccc	agtaactgac	acaaacctca	agcttaccaa	3720
agaaatgctc	agaaaactgg	gataaaaagg	ggagataact	tatagaaggg	gatggtatcc	3780
ccagcaatat	tcagcaacat	tgctgtaaaa	agaagaaaat	ctgagtgaag	gtttgactgg	3840
tttcccatga	gaggcagaca	gggtcaagg	ggggtcacat	ttactctaac	cagtctcctc	3900
tctcatattt	gtcttctagg	ctaactgcc	ggcgccaaa	ggacagtatg	ttcacacggg	3960
ttcttctggg	gctgcttcca	cccagtcgct	cttcacagcc	tgctatacct	actagggtcc	4020
aatgcccggc	agcctagctc	cagtgccttc	agtaggagg	ctgaaaggga	gcaacttttc	4080
ctctaattcct	ggaaattcga	cacaattaga	tttgaactgc	tggaaataca	acacatgtta	4140
aatcttaagt	acaaggggga	aaaaataaat	cagttattga	aacataaaaa	tgaataccaa	4200
ggacctgatc	aaatttcaca	cagcagtttc	cttgcaacac	tttcagctcc	ccatgctcca	4260
gaatacccac	ccaagaaaat	aataggcttt	aaaacaatat	cggctcctca	tccaaagaac	4320
aactgctgat	tgaaacacct	cattagctga	gtgtagagaa	gtgcattcta	tgaaacagtc	4380
ttagcagtgg	taggttggga	aggagatagc	tgcaaccaaa	aaagaaataa	atattctata	4440
aaccttcagc	tgctatcggg	tttcactttt	ctgctcttgc	tgtccaaaga	ctcagtgtat	4500
ttcattactt	ttgactctac	tagacatgac	tgggtttcaa	cagtaaagg	cttcaactct	4560
tgctagtcac	tggaaatcaag	cgcgaaaatt	ttaaaaactg	agatgctcag	gccacacccc	4620
agctcaatta	aatcagaaac	cctagacttg	ggatcc			4656

<210> 121
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<220>
 <223> glucagon (GCG) preproprotein; enteroglucagon;
 glicentin-related polypeptide (GRPP);
 oxyntomodulin (OXY, OXM)

<400> 121	
gctctgttct	acagcacact accagaagac agcagaaatg aaaagcattt actttgtggc 60
tggtgtattt	gtaatgctgg tacaaggcag ctggcaacgt tcccttcaag acacagagga 120
gaaatccaga	tcattctcag ctcccaggc agaccactc agtgatcctg atcagatgaa 180
cgaggacaag	cgccattcac agggcacatt caccagtgcac tacagcaagt atctggactc 240
caggcgtgcc	caagattttg tgcagtgggt gatgaatacc aagaggaaca ggaataacat 300
tgccaaacgt	cacgatgaat ttgagagaca tgctgaaggg acctttacca gtgatgtaag 360
ttcttatttg	gaaggccaag ctgccaagga attcattgct tggctggtga aaggccgagg 420
aaggcgagat	ttcccagaag aggtcgccat tgttgaagaa cttggccgca gacatgctga 480
tggttctttc	tctgatgaga tgaacaccat tcttgataat cttgccgcca gggactttat 540
aaactggttg	attcagacca aaatcactga caggaaataa ctatatcact attcaagatc 600
atcttcacaa	catcacctgc tagccacgtg ggatgtttga aatgttaagt cctgtaaatt 660
taagaggtgt	attctgaggc cacattgctt tgcattgcaa taaataaatt ttcttttagt 720
gttgtgtagc	caaaaattac aaatggaata agtttttatc aaaatattgc taaaatatca 780
gctttaaaaa	atgaaagtgc tagattctgt tattttcttc ttatttttga tgaagtaccc 840
caacctgttt	acatttagcg ataaaaattat ttttctatga tataatttgt aaatgttaa 900
tattccgatc	tgacatatct gcattataat aataggagaa tagaagaact ggtagccaca 960
gtggtgaaat	tggaaagaga actttcttcc tgaaaccttt gtcttaaaaa tactcagctt 1020
tcaatgtatc	aaagatacaa ttaataaaaa ttttcaagct tc 1062

<210> 122
 <211> 2578
 <212> DNA
 <213> Homo sapiens

<220>

<223> monocarboxylate transporter 1 (MCT1); solute
carrier, family 16, member 1 (SLC16A1)

<400> 122

```
tctacactta aaatgccacc agcagttgga ggtccagttg gatacacccc cccagatgga 60
ggctgggggt gggcagtggt aattggagct ttcatttcca tcggcttctc ttatgcattt 120
cccaaatcaa ttactgtctt cttcaaagag attgaaggta tattccatgc caccaccagc 180
gaagtgtcat ggatatcctc cataatgttg gctgtcatgt atggtggagg tcctatcagc 240
agtatcctgg tgaataaata tggaagtcgt atagtcatga ttggtggtgg ctgcttgtca 300
ggctgtgggt tgattgcagc ttctttctgt aacaccgtac agcaactata cgtctgtatt 360
ggagtcattg gaggtccttg gcttgccttc aacttgaatc cagctctgac catgattggc 420
aagtatttct acaagaggcg accattggcc aacggactgg ccatggcagg cagccctgtg 480
ttcctctgta ctctggcccc cctcaatcag gttttcttcg gtatctttgg atggagagga 540
agctttctaa ttcttggggg cttgctacta aactgctgtg ttgctggagc cctcatgcga 600
ccaatcgggc ccaagccaac caaggcaggg aaagataagt ctaaagcatc ccttgagaaa 660
gctggaaaat ctggtgtgaa aaaagatctg catgatgcaa atacagatct tattggaaga 720
caccctaaac aagagaaacg atcagtcttc caaacaatta atcagttcct ggacttaacc 780
ctattcacc cagagaggct tttgctatac ctctctggaa atgtgatcat gttttttgga 840
ctctttgcac ctttgggtgt tcttagtagt tatgggaaga gtcagcatta ttctagttag 900
aagctcgcc tcttcttttc cattctggct tttgttgaca tggtagcccg accatctatg 960
ggactttag ccaacacaaa gccaaataaga cctcgaattc agtatttctt tgcggcttcc 1020
gttgttgcaa atggagtgtg tcatatgcta gcacctttat ccactaccta tgttggattc 1080
tgtgtctatg cgggattctt tggatttgcc ttcgggtggc tcagctccgt attgtttgaa 1140
acattgatgg accttgttgg accccagagg ttctccagcg ctgtgggatt ggtgaccatt 1200
gtggaatgct gtccctgtcct cctggggcca ccacttttag gtcggctcaa tgacatgtat 1260
ggagactaca aatacacata ctgggcatgt ggcgtcgtcc taattatttc aggtatctat 1320
ctcttcattg gcatgggcat caattatcga cttttggcaa aagaacagaa agcaaacgag 1380
cagaaaaagg aaagtaaaga ggaagagacc agtatagatg ttgctgggaa gccaaatgaa 1440
gttaccaaaa cagcagaatc tccggaccag aaagacacag aaggagggcc caaggaggag 1500
gaaagtcag tctgaatcca tggggctgaa gggtaaattg agcagttcat gaccaggat 1560
atctgaaaat attctactgg cctgtaatct accagtgggt ctcaatgcaa atagtagaca 1620
tttgtgtgga aatcatacca gttgttcatt gatgggattt ttgtttgact ccttaccaat 1680
agcctgaatt tgaggaggga atgattggta gcaaaggatg ggggaaagaa gtaggttctg 1740
ttttgttttg ttttaatctt agcttttaat agtgtcataa agattataat atgtgcctta 1800
agtttttagtc tttagaactc tagagagcct taacttctta aaccattttt gctgaattca 1860
tctatttoga gtgttgtgtt aaaaggaaaa ataacaacta acttgtttga ggcaaatcta 1920
aaatttaaaa ttaattgtgc ttcattgtta catgtaatat atttcagaca ttttactgg 1980
aagatttatg aacagaaata ttggttgaaa gttagagatt ttacaaaatg ctgacaaaaa 2040
tattttccta gcatcagtag atttctggca tatgtttctg ctagctatat atttaggaaa 2100
ttcaaagcat aaaacttttg caacatcttg gctgttctag acacagtgtt cttgtcaacc 2160
cctctcaggt accttttctt gggatgctta ttagaagcca agtaaagtgc ttaaggtttg 2220
ttttcattaa attagctatt tctgctcccc tgttcaaaga tgcattttga gtgtttatag 2280
atcactgccc tttttgaaat cacctggtat tatttttctt actggaaaag ttagtattaa 2340
aatctacaga actacatatt tgtgcctcct tggtaaatac aacacatcta attaaatgta 2400
gacagatatt tcaaacatca gctgaattca cttaagtttt tccaaaacct cagttaaact 2460
gtgaagctat tggaattttt ttttcttgga atttttcccc tttgattcac agtgggtcca 2520
tttatatctg cttctagctt agtgctatgt gtgagatatg tgtgtgtttg gtgttttt 2578
```

<210> 123

<211> 4122

<212> DNA

<213> Homo sapiens

<220>

<223> 2-oxoglutarate dehydrogenase (OGDH) precursor; 2-oxoglutarate
dehydrogenase E1 component, mitochondrial precursor;
alpha-ketoglutarate dehydrogenase; oxoglutarate
(alpha-ketoglutarate) dehydrogenase (lipoamide)

<400> 123

cgggttcggg	tggagctgag	ccggagacag	gcaattgtga	aaaacttcag	gacaaaaaatg	60
tttcatttaa	ggacttgtgc	tgctaagttg	aggccattga	cggcttccca	gactgttaag	120
acattttcac	aaaacagacc	agcagcagct	aggacatttc	aacagattcg	gtgctattct	180
gcacctgttg	ctgctgagcc	ctttctcagt	gggactagtt	cgaactatgt	ggaggagatg	240
tactgtgctt	ggctggaaaa	ccccaaaagt	gtacataagt	catgggacat	tttttttcgc	300
aacacgaatg	ccggagcccc	accgggcact	gcctaccaga	gtcccccttc	cctgagccga	360
ggctccctgg	ctgctgtggc	ccatgcacag	tccttggtag	aagcacagcc	caacgtggac	420
aagctcgtgg	aggaccacct	ggcagtgacg	tcactcatca	gggcatatca	gatacgaggg	480
caccatgtag	cacagctgga	ccccctgggg	attttggtatg	ctgatctgga	ctcctccgtg	540
cccgttgaca	ttatctcatc	cacagacaaa	cttgggttct	atggcctgga	tgagtctgac	600
ctcgacaagg	tcttccactt	gcccaccacc	actttcatcg	ggggacagga	atcagcactt	660
cctctgcggg	agatcatccg	tcggctggag	atggcctact	gccagcatat	tggggtggag	720
ttcatgttca	tcaatgacct	ggagcagtcg	cagtggaatc	ggcagaagtt	tgagaccctt	780
gggatcatgc	agttcacaaa	tgaggagaaa	cggaccctgc	tggccaggct	tgtgcggtcc	840
accaggtttg	aggagtccct	acagcggaag	tggctcctctg	agaagcgctt	tggctctagaa	900
ggctgcgagg	tactgatccc	tgccctcaag	accatcattg	acaagtctag	tgagaatggc	960
gtggactacg	tgatcatggg	catgccacac	agagggcggc	tgaacgtgct	tgcaaatgtc	1020
atcaggaagg	agctggaaca	gatcttctgt	caattcgatt	caaagctgga	ggcagctgat	1080
gagggctccg	gagatgtgaa	gtaccacctg	ggcatgtatc	accgcaggat	caatcgtgtc	1140
accgacagga	acattacctt	gtccttggtg	gccaaccctt	cccaccttga	ggccgctgac	1200
cccgtgtgga	tgggcaagac	caaagccgaa	cagttttact	gtggcgacac	tgaagggaaa	1260
aaggtcatgt	ccatcctggt	gcatggggat	ctgcatcttg	ctggccaggg	cattgtgtac	1320
gagaccttcc	acctcagcga	cctgccatcc	tacacaactc	atggcaccgt	gcacgtggtc	1380
gtcaacaacc	agatcggctt	caccaccgac	cctcggatgg	cccgtcctc	cccctacccc	1440
actgacgtgg	cccgagtggg	gaatgcccc	attttccacg	tgaactcaga	tgaccccgag	1500
gctgtcatgt	acgtgtgcaa	agtggcggcc	gagtggagga	gcaccttcca	caaggacgtg	1560
gttgctcatt	tgggtgtgta	ccggcgcaac	ggccacaacg	agatggatga	gcccattgtc	1620
acgcagccgc	tcatgtacaa	gcagatccgc	aagcagaagc	ctgtgttaca	gaagtacgct	1680
gagctgtctg	tgtcgcaggg	tgtggtcaac	cagcctgagt	atgaggagga	aatttccaag	1740
tatgataaga	tctgtgagga	agcttttgcc	agatctaaag	atgagaagat	cttgcacatt	1800
aagcactggc	tggactctcc	ctggcctggc	ttcttcaccc	tggacgggca	gcccaggagc	1860
atgtcctgcc	cctccacggg	tctgacggag	gatattctga	cacacatcgg	gaatgtggct	1920
agttctgtgc	ctgtggaaaa	ctttactatt	catggagggc	tgagccggat	cttgaagact	1980
cgtggggaaa	tgggtgaagaa	ccggactgtg	gactgggctc	tagcggagta	catggcggtt	2040
ggctcgctcc	tgaaggaggg	catccacatt	cggctgagcg	gccaggacgt	ggagcggggc	2100
acattcagcc	accgccacca	tgtgctccat	gaccagaatg	tggacaagag	aacctgcac	2160
cccatgaacc	atctctggcc	caatcaggcc	ccctatactg	tgtgcaacag	ctcactgtct	2220
gagtagcgcg	tgtgggctt	tgaagctggg	cttcgcattg	ccagtcctaa	tgccctggtc	2280
ctctgggaag	cccaatttgg	tgacttccac	aacacggccc	agtgtatcat	cgaccagttc	2340
atctgccccg	gacaagccaa	gtgggtgcgg	cagaattgca	tcgtgttgct	gctgccccat	2400
ggcatggagg	gcatgggtcc	agaacattcc	tccgcccgc	cagagcgggt	cttgacagtg	2460
tgaacgatg	accagatgt	cctgccagac	cttaaagaag	ccaacttcga	catcaatcag	2520
ctatatgact	gcaattgggt	tgttgctcaac	tgtctcactc	ctggcaactt	cttccacgtg	2580
ctacgacgcc	agatcctgct	gccattccgg	aagccgttaa	ttatcttcac	ccccaaatcc	2640
ctgttgcgcc	accccgaggc	cagatccagc	tttgatgaga	tgcttccagg	aaccacttc	2700
cagcgggtga	tcccagaaga	tggccctgca	gctcagaacc	cagaaaatgt	caaaaggctt	2760
ctcttctgca	ccggcaaaagt	gtattatgac	ctcaccggg	agcgcaaagc	acgcgacatg	2820
gtggggcagg	tggccatcac	aaggattgag	cagctgtcgc	cattcccctt	tgacctcctg	2880
ctgaaggagg	tgcagaagta	ccccaatgct	gagctggcct	ggtgccagga	ggagcacaag	2940
aaccaaggct	actatgacta	cgtgaagcca	agacttcgga	ccaccatcag	ccgcgccaa	3000
ccgctctggg	atgccggccg	gaaccacagc	gctgctccag	ccaccggcaa	caagaagacc	3060
cactgacgga	gctgcagcgc	ctcctggaca	cggccttcga	cctggacgtc	ttcaagaact	3120
tctcgtagat	gctgcctagg	gttgcttggg	ccactgccct	ctccacaccc	atgactgccc	3180
cttgcttctc	aactaaagaa	tagtgctca	gcgctgcccc	caccaccgtc	ctcctcgctg	3240
tgccaccacc	cctccctctg	ctctcatagg	agttaggctg	tcgtccccct	ccagtgtctg	3300
gctgccccac	aggccacacg	ctgcccaggc	tctgctgact	tctgagcagt	tttccaggag	3360
gccgggggga	gcaggaggag	gaaaggtgag	ccccagggga	tgtccttggg	gaggggtcag	3420
ctctggcccc	aatcctcccc	accagtctca	cccactagga	taggaactgg	gccttgtgtg	3480
ctggcttccg	ctgtcaccga	gcaaggcaca	ggctcctgta	tttgagacta	ggatagcttc	3540
atcttgagcc	tgagccttag	aatctgtaga	ggagcctgga	gtcggatcta	gcatgggctg	3600

```

gcagagggttt ctaggggtggg ccccagccgt ggcggtgaact gaggatgacc cggggcagct 3660
ggcaggagag agccttgccc tgacctggca cagaaagggc agcttcagtc tctgcagtgt 3720
ccattatctg ctgttccttc gaggggtcca ggctgtgtgt ggggccaag catgccccac 3780
ccacctcctt gggcccaggc agcacctgga gccacagag tctgtgtgta gccaggaagc 3840
cccgtcagg tagccaccgc cggggcactg gctgctctgt cttggtcctg ttaacctcc 3900
acctcctctc ttggactccc tccccacccc aaccactctt tctttctcct ttaaccctcc 3960
ggagactttc tgatgcatcg ttttctttgc tgtgccaaag caggtcagaa gagggagagg 4020
aggggctggg ggtgaggggc caggccatgg ccaaggggcc agctgcccct catttatcac 4080
tctgaccttc acagggacag atctgattta tttatatttg tt 4122

```

<210> 124

<211> 1450

<212> DNA

<213> Homo sapiens

<220>

<223> alcohol dehydrogenase 1A (ADH1A, ADH1); class I
alcohol dehydrogenase alpha subunit (aADH);
aldehyde reductase

<400> 124

```

gatgcacttg agcaggggaag aaatccacaa ggactcacca gtctcctggt ctgcagagaa 60
gacagaatca acatgagcac agcaggaaaa gtaatcaaat gcaaagcagc tgtgctatgg 120
gagttaaaga aacctttttc cattgaggag gtggaggttg cacctcctaa ggcccatgaa 180
gttcgtatta agatgggtggc tgtaggaatc tgtggcacag atgaccacgt ggtagtggt 240
accatgggtga cccacttcc tgtgatttta ggccatgagg cagccggcat cgtggagagt 300
gttggaagaag gggtgactac agtcaaaacca ggtgataaag tcatcccact cgctattcct 360
cagtgtggaa aatgcagaat ttgtaaaaac ccggagagca actactgctt gaaaaacgat 420
gtaagcaatc ctcaggggac cctgcaggat ggcaccagca gggtcacctg caggaggaag 480
cccattccacc acttccttgg catcagcacc ttctcacagt acacagtggg ggatgaaaat 540
gcagtagcca aaattgatgc agcctcgctt ctagagaaag tctgtctcat tggctgtgga 600
ttttcaactg gttatgggtc tgcagtcaat gttgccagg tcaccccagg ctctacctgt 660
gctgtgtttg gcctgggagg ggtcgcccta tctgctatta tgggctgtaa agcagctggg 720
gcagccagaa tcattgcggg ggacatcaac aaggacaaat ttgcaaaggc caaagagttg 780
ggtgccactg aatgcatcaa ccctcaagac tacaagaaac ccatccagga ggtgctaaag 840
gaaatgactg atggaggtgt ggatttttca tttgaagtca tcggtcggct tgacaccatg 900
atggcttccc tgttatgttg tcatgaggca tgtggcacaa gtgtcatcgt aggggtacct 960
cctgattccc aaaacctctc aatgaacct atgctgctac tgactggacg tacctggaag 1020
ggagctattc ttggtggctt taaaagtaaa gaatgtgtcc caaaacttgt ggctgatttt 1080
atggctaaga agttttcatt ggatgcatta ataaccatg ttttaccttt tgaaaaaata 1140
aatgaaggat ttgacctgct tcactctggg aaaagtatcc gtaccattct gatgttttga 1200
gacaatacag atgttttccc ttgtggcagt cttcagcctc ctctacccta catgatctgg 1260
agcaacagct gggaaatatc attaattctg ctcatcacag attttatcaa taaattacat 1320
ttgggggctt tccaaagaaa tggaaattga tgtaaaatta tttttcaagc aaatgtttta 1380
aatccaaatg agaactaaat aaagtgttga acatcagctg gggaattgaa gccataaac 1440
cttccttctt 1450

```

<210> 125

<211> 1523

<212> DNA

<213> Homo sapiens

<220>

<223> carbonic anhydrase II (CA2, CA II); carbonic
anhydrase B; carbonic dehydratase; carbonate
dehydratase II

<400> 125

```

gtgccgattc ctgccctgcc ccgaccgcca gcgcgaccat gtcccatcac tgggggtacg 60
gcaaacacaa cggacctgag cactggcata aggacttccc cattgccaa ggagagcgcc 120
agtcccctgt tgacatcgac actcatacag ccaagtatga cccttcctg aagcccctgt 180

```

ctgttttcta	tgatcaagca	acttccctga	ggatcctcaa	caatgggtcat	gcttttcaacg	240
tggagtttga	tgactctcag	gacaaagcag	tgctcaaggg	aggacccctg	gatggcactt	300
acagattgat	tcagttttcac	tttcaactggg	gttcaacttga	tggacaaggt	tcagagcata	360
ctgtggataa	aaagaaatat	gctgcagaac	ttcacttggg	tcactggaac	accaaatatg	420
gggatttttg	gaaagctgtg	cagcaacctg	atggactggc	cgttctaggt	atTTTTTTga	480
agggttggcag	cgctaaaccg	ggccttcaga	aagttgttga	tgtgctggat	tccattaaaa	540
caaagggcaa	gagtgtgtgac	ttcactaact	tcgatcctcg	tggcctcctt	cctgaatccc	600
tggattactg	gacctaccca	ggctcactga	ccacccctcc	tcttctggaa	tgtgtgacct	660
ggattgtgct	caaggaaccc	atcagcgtca	gcagcgagca	ggtgttgaaa	ttccgtaaac	720
ttaaacttcaa	tggggagggg	gaaccggaag	aactgatggg	ggacaactgg	cgcccagctc	780
agccactgaa	gaacaggcaa	atcaaagctt	ccttcaaata	agatgggtccc	atagtctgta	840
tccaaataat	gaatcttcgg	gtgtttccct	ttagctaagc	acagatctac	cttgggtgatt	900
tggaccctgg	ttgcttttgg	tctagttttc	tagacccttc	atctcttact	tgatagactt	960
actaataaaa	tgtgaagact	agaccaattg	tcactgcttga	cacaactgct	gtggctgggt	1020
ggtgctttgt	ttatggtagt	agtttttctg	taacacagaa	tataggataa	gaaataagaa	1080
taaagtacct	tgactttgtt	cacagcatgt	agggtgatgag	cactcacaat	tgttgactaa	1140
aatgctgctt	ttaaaacata	ggaaagtaga	atgggttgagt	gcaaatccat	agcacaagat	1200
aaattgagct	agttaaggca	aatcaggtaa	aatagtcatg	attctatgta	atgtaaacca	1260
gaaaaaataa	atgttcatga	tttcaagatg	ttatatataa	gaaaaacttt	aaaaattatt	1320
atatatttat	agcaaagtta	tcttaaatat	gaattctgtt	gtaatttaat	gacttttgaa	1380
ttacagagat	ataaatgaag	tattatctgt	aaaaattgtt	ataattagag	ttgtgatata	1440
gagtatatatt	ccattcagac	aatatatcat	aacttaataa	atattgtatt	ttagatatat	1500
tctctaataa	aattcagaat	tct				1523

<210> 126

<211> 655

<212> DNA

<213> Homo sapiens

<220>

<223> carbonic anhydrase IV (CA4, CA-IV) precursor;
carbonic dehydratase; carbonate dehydratase IV;
retinitis pigmentosa 17 (autosomal dominant)

<400> 126

ccaatggcca	ttagccttca	cccatccgca	cgacctcatt	tacatcccct	attcttatca	60
tcttccagac	cacctcgaga	gccaggggtt	cagagcccct	ctttcctaata	gagggctccc	120
aggacaggat	gaggtgcctg	cctgagggtca	cacggcaggg	agtgcagctc	cccctgcccc	180
gacctgtgta	gccccatcac	ttccgcagat	cctggcattc	tctcagaagc	tgtactacga	240
caaggaacag	acagtgaagca	tgaaggacaa	tgtcaggccc	ctgcagcagc	tggggcagcg	300
cacggtgata	aagtccgggg	ccccgggtcg	gccgctgccc	tgggccctgc	ctgcctgtgt	360
gggccccatg	ctggcctgcc	tgctggccgg	cttccctgoga	tgatgggtca	cttctgcacg	420
cagcctctct	gttgccctcag	ctctccaagt	tccaggcttc	cggtccttag	ccttcccagg	480
tgggacttta	ggcatgatta	aaatatggac	atatttttgg	agaaaccttt	ctcaagtgtg	540
tttttagcct	tccacaacta	ccccaccctg	tccccctcca	cccacccctg	ttcctcctgt	600
tccagggcgg	gggctttaag	gccaggagat	ttctccaagc	aggtaccacc	aggtg	655

<210> 127

<211> 2657

<212> DNA

<213> Homo sapiens

<220>

<223> phosphoenolpyruvate carboxykinase 1, soluble
(PCK1, PEPCK)

<400> 127

tgggaacaca	aacttgctgg	cggaagagc	ccggaagaa	acctgtggat	ctcccttcga	60
gatcatccaa	agagaagaaa	ggtgacctca	cattcgtgcc	ccttagcagc	actctgcaga	120
aatgcctcct	cagctgcaaa	acggcctgaa	cctctcgccc	aaagttgtcc	agggaagcct	180
ggacagcctg	ccccaggcag	tgagggagtt	tctcgagaat	aacgctgagc	tgtgtcagcc	240

tgatcacatc	cacatctgtg	acggctctga	ggaggagaat	ggcggtcttc	tgggccagat	300
ggaggaagag	ggcatcctca	ggcggtctgaa	gaagtatgac	aactgctggt	tggctctcac	360
tgaccccagg	gatgtggcca	ggatcgaaag	caagacggtt	atcgtcacc	aagagcaaag	420
agacacagt	cccatcccca	aaacaggcct	cagccagctc	ggtcgctgga	tgtagagga	480
ggattttgag	aaagcgttca	atgccagggt	cccagggtgc	atgaaagggtc	gcaccatgta	540
cgtcatccca	ttcagcatgg	ggccgctggg	ctcacctctg	tcgaagatcg	gcatcgagct	600
gacggattcg	ccctacgtgg	tggccagcat	gcggtatcatg	acgcggatgg	gcacgcccgt	660
cctggaagca	ctgggcgatg	gggagtttgt	caaatgcctc	cattctgtgg	ggtgccctct	720
gcctttacaa	aagccttttg	tcaacaactg	gccctgcaac	ccggagctga	cgctcatcgc	780
ccacctgcct	gaccgcagag	agatcatctc	ctttggcagt	gggtacggcg	ggaactcgct	840
gctcgggaag	aagtgccttg	ctctcaggat	ggccagcccg	ctggcagagg	aggaagggtg	900
gctggcagag	cacatgctga	ttctgggtat	aaccaaccct	gagggtgaga	agaagtacct	960
ggcgcccgca	tttcccagcg	cctgcgggaa	gaccaacctg	gccatgatga	accccagcct	1020
ccccggctgg	aaggttgagt	gcgtcgggga	tgacattgcc	tggtatgaagt	ttgacgcaca	1080
aggtcattta	agggccatca	accagaaaa	tggctttttc	ggtgtcgctc	ctgggacttc	1140
agtgaagacc	aacccaatg	ccatcaagac	catccagaag	aacacaatct	ttaccaatgt	1200
ggccgagacc	agcgacgggg	gcgtttactg	ggaaggcatt	gatgagccgc	tagcttcagg	1260
cgtcaccatc	acgtcctgga	agaataagga	gtggagctca	gaggatgggg	aaccttgtgc	1320
ccacccaac	tcgaggttct	gcacccctgc	cagccagtgc	cccatcattg	atgctgcctg	1380
ggagtctccg	gaagggtgtt	ccattgaagg	cattatcttt	ggaggccgta	gacctgctgg	1440
tgctcctcta	gtctatgaag	ctctcagctg	gcaacatgga	gtctttgtgg	ggcgcccat	1500
gagatcagag	gccacagcgg	ctgcagaaca	taaaggcaaa	atcatcatgc	atgacccctt	1560
tgccatgcgg	cccttctttg	gctacaactt	cggcaaatatc	ctggcccact	ggcttagcat	1620
ggcccagcac	ccagcagcca	aactgcccaa	gatcttccat	gtcaactggt	tccggaagga	1680
caaggaaggc	aaattcctct	ggccaggctt	tggagagaa	tccagggtgc	tggagtggat	1740
gttcaaccgg	atcgatggaa	aagccagcac	caacgtcacg	cccataggct	acatcccaa	1800
ggaggatgcc	ctgaacctga	aaggcctggg	gcacatcaac	atgatggagc	ttttcagcat	1860
ctccaaggaa	ttctgggaca	aggaggtgga	agacatcgag	aagtatctgg	tggatcaagt	1920
caatgccgac	ctcccctgtg	aaatcgagag	agagatcctt	gccttgaagc	aaagaataag	1980
ccagatgtaa	tcagggcctg	agaataagcc	agatgtaatc	agggcctgag	tgctttacct	2040
ttaaaatcat	taaattaaaa	tccataaggt	gcagtaggag	caagagaggg	caagtgttcc	2100
caaattgacg	ccaccttaata	atcatcacca	caccgggagc	agatctgaag	gcacactttg	2160
atttttttta	ggataagaac	cacagaacac	tgggtagtag	ctaataaagt	tgagaaggga	2220
aatcttagca	tgcttccaaa	aattcacatc	caatgcatac	tttgttcaaa	tttaaggtta	2280
ctcaggcatt	gatcttttca	gtgttttttc	acttagctat	gtggattagc	tagaatgcac	2340
accaaaaaga	tacttgagct	gtatatatat	atgtgtgtgt	gtgtgtgtgt	gtgtgtgtgt	2400
gtgcatgtat	gtgcacatgt	gtctgtgtga	tatttggtat	gtgtatttgt	atgtactgtt	2460
attcaaaaata	tatttaatac	ctttggaaaa	tcttgggcaa	gatgacctac	tagttttcct	2520
tgaaaaaaag	ttgcttttgt	attaatatgt	tgcttaaat	atttttatac	accattgttc	2580
cttaccttta	cataattgca	atatttcccc	cttactactt	cttggaaaaa	aattagaaaa	2640
tgaagtttat	agaaaag					2657

<210> 128

<211> 1248

<212> DNA

<213> Homo sapiens

<220>

<223> syntaxin 4A (STX4A, STX4) precursor; syntaxin
(placental)

<400> 128

caagatatcg	aattccaaat	ttgagggcct	cccggctctg	gcgcccggagg	gagagctcag	60
gccgccatgc	gcgacaggac	ccacgagctg	agacaggggg	atgacagctc	ggacgaagag	120
gacaaggagc	gggtcgcgct	ggtggtgcac	ccgggcacgg	cacggctggg	gagcccggac	180
gaggagttct	tccacaagg	ccggacaatt	cgtcagacta	ttgtcaaaact	ggggaataaa	240
gtccaggagt	tggagaaaca	gcaggtcacc	atcctggcca	cgcccccttc	cgaggagagc	300
atgaagcagg	agctgcagaa	cctgcgcgat	gagatcaaac	agctggggag	ggagatccgc	360
ctgcagctga	aggccatga	gccccagaag	gaggaagctg	atgagaacta	taactccgtc	420
aacacaagaa	tgagaaaaac	ccagcatggg	gtcctgtccc	agcaattcgt	ggagctcatc	480
aacaagtgca	attcaatgca	gtccgaatac	cgggagaaga	acgtggagcg	gattccggag	540

cagctgaaga	tcaccaatgc	tggcatggtg	tctgatgagg	agttggatca	gatgctggac	600
agtgggcaaa	gcgaggtgtt	tgtgtccaat	atccttaagg	acacgcaggt	gactcgacag	660
gccttaaatg	agatctcggc	ccggcacagt	gagatccagc	agcttgaacg	cagtattcgt	720
gagctgcacg	acatattcac	ttttctggct	accgaagtgg	agatgcaggg	ggagatgac	780
aatcggattg	agaagaacat	cctgagctca	gcggaactacg	tggaaactgg	gcaggagcac	840
gtcaagacgg	ccctggagaa	ccagaagaag	gtgaggaaga	agaaagtctt	gattgccatc	900
tgtgtgtcca	tcaccgtcgt	cctcctagca	gtcatcattg	gcgtcacagt	ggttggataa	960
tgtcgcacat	tgttggcact	aggagcacca	ggaacccagg	gcctggcctt	ctctcccagc	1020
agcctggggg	gcaggcagag	cctccagtcg	gaccccttcc	tcacacactg	gcccttatgc	1080
agaagggcag	acagttcttc	tggggttggc	agctgctcat	tcatgatggc	ctcctccttc	1140
aggcctcaat	gcctggggga	ggcctgcact	gtcctgattg	gccgggacac	acggttttgt	1200
aaaaaattaa	aaaacaaaaa	aagagcatag	aaaaaaaaaa	aaccgagt		1248

<210> 129

<211> 2010

<212> DNA

<213> Homo sapiens

<220>

<223> chaperonin subunit 6A (CCT6A); chaperonin containing T-complex protein 1 (TCP1), subunit 6A; chaperonin containing TCP1, zeta 1 (CCT-zeta-1); histidine transport regulator 3 (HTR3); acute morphine dependence related protein 2; TRiC chaperonin subunit

<400> 129

cgagaagacc	cggatagtct	ctcccggcca	cgccgcgcgc	gctctgggca	ctcagcatcg	60
tttccttttc	ctccgctgga	gcagctatgg	cggcggtgaa	gacctgaac	cccaaggccg	120
aggtggcccc	agcgcaggcg	gcgctggcgg	tcaacatcag	cgcagcgcgg	ggtctgcagg	180
acgtgctaag	gaccaacctg	gggcccgaag	gcaccatgaa	gatgctcggt	tctggcgctg	240
gagacatcaa	acttactaaa	gacggcaatg	tgtgtgttca	cgaaatgcaa	attcaacacc	300
caacagcttc	cttaatatga	aaggtagcaa	cagcccagga	tgatataact	ggtgatggta	360
cgacttctaa	tgtcctaata	attggagagc	tgctgaaaca	ggcggatctc	tacatttctg	420
aaggccttca	tcctagaata	atcactgaag	gatttgaagc	tgcaaaggaa	aaggcccttc	480
agtttttggg	agaagtcaaa	gtaagcagag	agatggacag	ggaaacactt	atagatgtgg	540
ccagaacatc	tcttcgtact	aaagtctcat	ctgaacttgc	agatgtctta	acagaggctg	600
tagtggactc	cattttggcc	attaaaaagc	aagatgaacc	tattgatctc	ttcatgattg	660
agatcatgga	gatgaaacat	aaatctgaaa	ctgatacaag	cttaatcaga	gggcttgttt	720
tggaccacgg	agcacggcat	cctgatatga	agaaaagggt	ggaggatgca	tacatcctca	780
cttgtaacgt	gtcattagag	tatgagaaaa	cagaagtga	ttctggcttt	ttttacaaga	840
gtgcagaaga	gagagaaaaa	ctcgtgaaag	ctgaaagaaa	attcattgaa	gatagggtta	900
aaaaaataat	agaactgaaa	aggaaagtct	gtggcgattc	agataaagga	tttgttggtta	960
ttaatcaaaa	gggaattgac	cccttttctc	tagatgctct	ttcaaaaagaa	ggcatagtcg	1020
ctctgcgcag	agctaaaagg	agaaatatgg	agaggctgac	tcttgcttgt	ggtggggtag	1080
ccctgaattc	ttttgacgac	ctaagtcctg	actgcttggg	acatgcagga	cttgtatatg	1140
agtatacatt	gggagaagag	aagtttacct	ttattgagaa	atgtaacaac	cctcgttctg	1200
tcacattatt	gatcaaagga	ccaaataagc	acacactcac	tcagatcaaa	gatgcagtga	1260
gggacggctt	gagggtgtgc	aaaaatgcta	ttgatgatgg	ctgtgtgggt	ccagggtgctg	1320
gtgccgtgga	agtggcaatg	gcagaagccc	tgattaaaca	taagcccagt	gtaaagggca	1380
gggcacagct	tggagtccaa	gcatttgctg	atgcattgct	cattattccc	aaggttcttg	1440
ctcagaactc	tggttttgac	cttcaggaaa	cattagttaa	aattcaagca	gaacattcag	1500
aatcagggtca	gcttgtgggt	gtggacctga	acacagggtga	gccaatgggtg	gcagcagaag	1560
taggcgtatg	ggataactat	tgtgtaaaga	aacagcttct	tcaactcctgc	actgtgattg	1620
ccaccaacat	tctcttggtt	gatgagatca	tgcgagctgg	aatgtcttct	ctgaaagggtt	1680
gaattgaagc	ttcctctgta	tctgaatctt	gaagactgca	aagtgatcct	gaggattaca	1740
gctgtggaat	ttttgtccaa	gcttcaataa	attttgaaag	aaattttccc	atatgaaaaa	1800
aggagagAAC	actggcatct	gttgaaattt	ggaagttctg	aaattatagt	atttttaaaa	1860
attgcactga	agtgtataca	cataaagcag	gtctttttatc	cagtgaacag	gatgttttgc	1920
tttagcagca	gtgacataaa	attccatggt	agataagcat	atgttactta	ccttgttatt	1980
aaatatttct	tgaaaagcag	gccacgaagg				2010

<210> 130
 <211> 2422
 <212> DNA
 <213> Homo sapiens

<220>

<223> UDP-glycosyltransferase 1 (UGT1);
 UDP-glycosyltransferase 1 family, polypeptide A6
 (UGT1A6); phenol UDP-glucuronosyltransferase
 (UDPGT); phenol transferase UGT1F; GNT1

<400> 130

taaagtaaca	acggtataaa	agagttttca	ctctccaaat	cacagggctc	ctaggtattt	60
tccctaaact	aaccactgct	ttccaggatg	gcctgcctcc	ttcgctcatt	tcagagaatt	120
tctgcagggg	ttttcttctt	agctcttttg	ggcatgggtg	taggtgacaa	gctgctgggtg	180
gtccctcagg	acggaagcca	ctggcttagt	atgaaggata	tagttgaggt	tctcagtgc	240
cggggctcatg	agattgtagt	ggtgggtgcct	gaagttaatt	tgcttttgaa	agaatacaaa	300
tactacacaa	gaaaaatcta	tccagtgcg	tatgaccaag	aagagctgaa	gaaccgttac	360
caatcatttg	gaaacaatca	ctttgctgag	cgatcattcc	taactgctcc	tcagacagag	420
tacaggaata	acatgattgt	tattggcctg	tacttcatca	actgccagag	cctcctgcag	480
gacagggaca	ccctgaactt	ctttaaggag	agcaagtttg	atgctctttt	cacagaccca	540
gccttaccct	gtgggggtgat	cctggctgag	tatttgggcc	taccatctgt	gtacctcttc	600
aggggttttc	cgtgttccct	ggagcataca	ttcagcagaa	gccagaccc	tgtgtcctac	660
attcccaggt	gctacacaaa	gttttcagac	cacatgactt	tttcccaacg	agtggccaac	720
ttccttggtta	atttggttga	gccctatcta	ttttattgtc	tgttttcaaa	gtatgagaaa	780
ctcgcacag	ctgtcctcaa	gagagatgtg	gatataatca	ccttatcaga	ggtctctgtt	840
tggctgttaa	gatatgactt	tgtgcttgaa	tatcctaggc	cggctcatgcc	caacatgggc	900
ttcattggag	gtatcaactg	taagaagagg	aaagacttgt	ctcaggaatt	tgaagcctac	960
attaatgctt	ctggagaaca	tgggaattgtg	gttttctctt	tgggatcaat	ggtctcagaa	1020
attccagaga	agaaagctat	ggcaattgtc	gatgcttttg	gcaaaaaccc	tcagacagtc	1080
ctgtggcggt	acactggaac	ccgaccatcg	aatcttgcca	acaacacgat	acttggttaag	1140
tggctacccc	aaaacgatct	gcttgggtcac	ccgatgaccc	gtgcctttat	cacccatgct	1200
ggttccccatg	gtgtttatga	aagcatatgc	aatggcgctt	ccatgggtgat	gatgcccttg	1260
tttggtgatc	agatggacaa	tgcaaagcgc	atggagacta	agggagctgg	agtgaccttg	1320
aatgttctgg	aaatgacttc	tgaagattta	gaaaatgctc	taaaagcagt	catcaatgac	1380
aaaagttaca	aggagaacat	catgcgcctc	tccagccttc	acaaggaccg	cccgggtggag	1440
ccgctggacc	tggccgtggt	ctgggtggag	tttgtgatga	ggcacaaggg	cgcgccacac	1500
ctgcgccccg	cagcccacga	cctcacctgg	taccagtacc	attccttgga	cgtgattggg	1560
ttcctcttgg	ccgtcgtgct	gacagtggcc	ttcatcacct	ttaaatgttg	tccttatggc	1620
tacccgaaat	gcttggggaa	aaaagggcga	gttaagaaa	cccacaaatc	caagacccat	1680
tgagaggtgg	gtgggaaata	aggtaaaatt	ttgaaccatc	cctagtcatt	tccaaacttg	1740
aaaacagaat	cagtgttaaa	ttcattttat	tcttattaag	gaaatacttt	gcataaatta	1800
atcagcccca	gagtgtcttt	aaaaaattct	cttaaataaa	aataatagac	tcgctagtca	1860
gtaaagatat	ttgaatatgt	atcgtgcccc	ctccggagtc	tttgatcagg	atgacatgtg	1920
ccatttttca	gaggacgtgc	agacaggctg	gcatctctaga	ttacttttct	tactctgaaa	1980
catggcctgt	ttgggagtg	gggattcaaa	ggtgggtcca	cggctgcccc	tactgcaaat	2040
ggcagtttta	atcttatctt	ttggcttctg	cagatgggtg	cattgatcct	taaccaataa	2100
tggtcagtc	tcactctctg	cctgacttca	taggtgccac	cttgtggttt	aaagaaggga	2160
agctttgtac	cttttagagt	taggtgaaat	gaatgaatgg	cttggagtgc	actgagaaca	2220
gcatatgatt	tcttgctttg	gggaaaaaga	atgatgctat	gaaattgggtg	ggtgggtgat	2280
ttgagaagat	aatcattgct	tatgtcaaat	ggagctgaat	ttgataaaaa	cccaaaatac	2340
agctatgaag	tgctgggcaa	gtttactttt	ttttctgatg	tttctctaaa	ctaaaaataa	2400
attaataaat	ttatataatt	ct				2422

<210> 131
 <211> 8447
 <212> DNA
 <213> Homo sapiens

<220>

<223> sulfotransferase family, cytosolic, 1A, phenol-preferring,
member 3 (SULT1A3, ST1A3); thermolabile phenol sulfotransferase
(STM); catecholamine-sulfating phenol sulfotransferase;
placental estrogen sulfotransferase (EST); aryl sulfotransferase

<400> 131

acctctgcct	cctgggttcca	agcaatcctc	cttcctcacc	ctccagagta	gctgggatta	60
cacgcgcctg	ccaccgcgcc	tggcctaatt	tttgtatttt	tagtagagat	gggggtttcc	120
aaccatgttg	gccaggtctg	tctccaaact	cctgacctca	ggtgatcctg	cccacctaag	180
cctcccaaaa	tgctggtatt	acaggcatga	gccaccgtgc	ccggcctaaa	taattaataa	240
aataatggac	gatgggtgcc	ttctactgag	ctcccggtaa	ttgtgagtga	gtagaggact	300
tgccctgggg	acattcagtg	acctgctggg	tgttgctgag	ctgtgaggaa	gttcaggtct	360
ggctgcagtg	gtgaggctgt	gactcaatca	atcactgctg	atgctcccag	gacctgcacc	420
agcttagtcc	taggggcaag	gattttaact	gtccacctca	gtttcttcat	ttgtaagatg	480
caaataacag	tcacccctgc	ctcatgggat	ggagctgtgt	aatgcccgca	acagtgcctg	540
ctgcatagag	gggttgctgc	cagctgcctc	tccctccttg	tctcttacct	gcctgctgcc	600
tgggtcagga	tgaagagggg	cccttggtgt	gccccacccc	tggtgcctg	ctaaggggcc	660
atgtgatctg	cctggcagag	gagtttcttc	aggaagaacc	agggcagctt	ctgcccctag	720
agggccaatg	cccttggtga	gtgcagtcct	ctggccccag	cctggtccac	ctctgggaag	780
agggtgcccc	gttgtgcaat	ccaggccccg	gcagctgagc	cctcatctca	gcagtcaggg	840
cggatactgg	agggggcttg	tggcatctga	ctctgtatct	cctacctgcc	cctctccttg	900
gtagctgtga	gaagtcaactg	ctttggggag	acctgatctg	gctgtgccag	atggacactg	960
agaaagaagt	agaagactca	gaattagaag	aggtagagtgg	gctttggtgg	cgggctccct	1020
acccactctc	ctgccctggg	ctgcctgtga	ccacactgct	tgccctctgca	ggcacactgg	1080
acagacctgc	tggagacctg	atcctcagtg	tccttacccc	ctcctacctc	ttttctgtgc	1140
cacctgctgt	gggtccagca	ggtttttact	tgagtacaat	aaaaagtctg	agtcaagggt	1200
gccttatggg	ggatgctgag	gggagggggcg	gagctagtag	cccaagggtcc	tgccagtcac	1260
ggggcttctc	caggggcaca	gaggaggcag	gagggggccc	tgggccctagc	acgtgaacag	1320
cttctactct	gcctggaaac	cccatgcctc	agctttcccc	tacttgccctc	tgagctcatg	1380
caattcttgg	aagcctggga	gacttacctt	gaaattgaat	gcaaatagga	caaagaccaa	1440
ggaggatggg	gggatgccct	ccttccacgg	ggccctgtgg	cttccaagtc	ttaatctcct	1500
ctagtctctt	gtctacggag	cctccttcaa	acccagggaa	agaaaagcac	ctgccagggt	1560
tgtttttctt	ctaggatctt	ctattgatgc	tctgtgaggt	cccccaggag	ccatgaagct	1620
agggtctggc	cctagggcaa	tgggactaca	gtgtccttgt	cctttcttat	tctttctgtt	1680
ctttctttct	ttcttttttt	tttttttttt	tttttttgag	acagagtctc	actctgttgc	1740
ccaggctgga	gtgcagtggt	gtgatcttgg	ctcactgaaa	cctccgcctc	ctgggttcaa	1800
gtgattctct	tgccctcagcc	tcctgagtag	ctaggattac	agggtgcccgc	catcatgccc	1860
agctaatttt	tgtattttta	gtagagacag	ggtttcacca	tggtggccag	cttgggtctcg	1920
aaactctgac	ctcaggtgat	cctgctgcac	cgacctccca	aagtactggg	attacaggcg	1980
tgagccacca	cgctcagcct	ctttcttgtt	ctatatgtcc	atgctctgct	ccactctgct	2040
cccttcactc	tgccccacac	atcactccag	actggccttg	tggtcagagc	ctggaatgcc	2100
tgggctgctg	ggggcctgtg	gactgcactg	ggccagaacc	cctgcccgcct	tcaagactgg	2160
cctgtagcca	gcaggtaggt	gacttttccc	aggccggcct	atcccacctt	tcccctccac	2220
tcactcaacct	cccttgccctg	ggtcaattag	agaaaagcttg	tcggccaggc	atggtggctc	2280
atgcctgtaa	tctcagcact	ttgggaggcc	gaggcgggcg	gatcatctga	gctcaggagt	2340
ttgagaccag	cctggccaac	atggcaaaaac	cccgtctcta	ctaaaaatac	aaaaattaac	2400
cggatgtggg	ggtgtgcacc	tgtaatccca	gctactcggg	aggctgaggc	agaagaatcg	2460
cttgaaccca	ggagggggag	gttacagtga	gcggagatcg	tgctactgca	ttgcagcctg	2520
ggcgagagag	cgagtctcca	tctcacataa	aaaaaagaaa	aagaaaagaaa	gcaagcttgt	2580
ctgttgccct	gccctgcagg	gtggagtcca	gaggggaagg	caggagccta	gtgacagctc	2640
aaaaaaaaaa	aaacccaaat	accaatgttg	gccccttttg	cctttcatte	atgtgttttc	2700
tatacactaa	actcacatat	tgggtttgca	gatcactcca	agcttggtctg	gagctgtggt	2760
ggtaaggagg	gtaatagaga	agcttcccca	ccctcaaccc	caccccttcc	ttcctggagt	2820
tcccagccct	gactttagat	ccctcccaca	ctggaccttc	aaaaccctca	gggcagagag	2880
cagccctaca	ctccctacac	cacaccata	ctcagcccct	gcaggcaagg	agagaacagg	2940
tcaggttccc	gagagctcag	gtgagtgaac	cgttggaatg	gcccagggca	ccttcaccct	3000
gctcagcttg	tggctccaac	attctagaag	ccgaggcctc	tgccatccct	gccctttccc	3060
atggatatct	catttcaatt	agacaacca	gcctggccgg	aatccccctg	cgttctctgt	3120
tttcccttgt	gtatttttga	gacagggtgt	tgctccgtca	cccaggctgg	agtgtagtgg	3180
gatcctggcc	cactgcagcc	tcaaattcct	aggctgaggc	aatcctgccg	cctcagcctc	3240

ctgagtagct	ggggttacaa	gagcaagcca	ccacacccag	ctaattttga	aaaatatattt	3300
ttgtagagga	gaggtcttgc	tttgttgtcc	aggttgggtct	caaactccag	ggctcaagg	3360
atcctttccc	gttggcctcc	caaggctctg	ggattacagg	cgggagtcac	cctgcctggg	3420
ccctccttt	tgatgagtc	tcagttttca	ttcccgacag	aggctctagc	ccctggtacc	3480
agcttagttg	ctcaatgggc	tgtgtttgtt	ctggagccca	gatggactgt	ggccaggcaa	3540
gtggatcaca	gacctggccg	gcctgggagg	tttccacatg	tgaggggcat	gaggggggct	3600
caaggagggg	agcatcgggg	agaggagcgc	actgggtgga	ggctgggggt	cccagcagga	3660
aatggtgaga	caaagggcgc	tggctggcag	ggagacagca	caggcaggcc	ctagagcttc	3720
ctcagcacag	ctggactctc	ctggagacct	tcacacaccc	tgatatctgg	gccccgcgct	3780
acgagggtgc	tttcaactgt	ctgcactatg	ccccaggccc	tgggattttg	aacagctctg	3840
caggtgactg	aaaggtgcgg	ccaggctggg	gaacgacctg	gtttcagccc	cagccccgcc	3900
actgactgac	tttgtgagt	cgggcaagtc	actcagcctc	cctaggcctc	agtgacttcc	3960
ctgaaagcaa	aaactctgca	aaggggcagc	tgggtgctgg	ctcacacctg	taatcccagc	4020
actttgggag	gctgaggtag	acaaatcact	tgaggccagg	agttctagac	cagcctggcc	4080
aacatggtga	aaccccatct	ctactaaaga	aaaaaataaa	ttagctgagc	atggtgttac	4140
atgcttgtaa	ttccagctac	ttgggatgcc	gaggcgggag	gattgcttga	acccaaggag	4200
tggagtttgc	agtgagctga	gattgtgcc	cactgcactc	cagcttgggt	gagagtgaga	4260
ctccatctca	aaaaaaaaaa	aaaaaagaga	gaatccact	ttcttgctgt	tgtgatggtg	4320
gtaagggaa	gggcctggct	ctggcccctg	atgcaggaa	atggagctga	tccaggacac	4380
ctcccgccc	ccactggagt	acgtgaagg	ggtcccgcctc	atcaagtact	ttgcagaggc	4440
actggggccc	ctgcagagct	tccaagcccc	acctgatgac	ctgctcatca	acacctaccc	4500
caagtctggt	aagtgaggag	ggccacccac	cctctcccag	gcggcagtc	ccaccttgg	4560
cagcaaggtc	gtgccctcag	cctgctcacc	tcctatctcc	ctccctctcc	aggcaccacc	4620
tgggtgagcc	agatactgga	catgatctac	caggcgccgc	acctagagaa	gtgtaaccgg	4680
gctcccatct	acgtacgggt	gcccttcctt	gaggtaaatg	atccagggga	acctcaggt	4740
gcatggctgg	gtcctggggg	taagggaagt	ggaggaagac	agggtgggg	cttcagctca	4800
ccagaccttc	cctgacccac	tactcagggc	tggagactct	gaaagacaca	ccgccccac	4860
ggctcatcaa	gtcacacctg	cccctggctc	tgctccctca	gactctgttg	gatcagaagg	4920
tcaaggtgag	gccggcctca	atggttcaca	cctgtcatcc	cagtttgaga	ctgaggagg	4980
aggatccctt	gaaggcgaga	gatggagacc	agcctgggca	acattgctgt	agagatgaca	5040
tccatctct	acaaaaataa	aattaacaac	ctggatggt	ggcatagact	gttcccagtt	5100
acttaggagg	ctcagcgggg	aggactgttt	atgcaaatag	gaagctgcaa	tgagccctga	5160
tgatcctgct	gctgcactcc	agcctgggca	acacagcaaa	accatctcta	cgaataaaaa	5220
agttccact	gactggcaag	gaaagccagg	aaggggggct	cagggtgccct	ctcagccatg	5280
tacctgttct	tctggaagg	cctcctcgct	tctgccaggc	tcatacacatc	tttttttttt	5340
ttgagacaga	gtcttgctct	gtcacccctg	ctggagtgc	gtggcatgat	ctcagctcac	5400
tgaacctcc	gcctccccag	ttcaagtgat	tctcctgcct	cagcctcctg	agtagctggg	5460
attacaggcg	tgtgctacca	cacccggcta	atttttgtat	tcttttttagt	agagacgggg	5520
tttcaccatg	ttggtcaagt	ggatctcaaa	ctcttgacct	tgtgatcctc	ctgcctcgac	5580
ctcacaaagt	gcttgaatta	caggcgtag	ccaccgcgcc	tgcccttttt	tttttttag	5640
acagtttcac	tcttgttgc	gaggttagag	cgaactcgtg	tgatctcggt	tcactgcaac	5700
caccgcctcc	tgggttcaag	caattctcct	gcttcagcct	cccaaggagc	tgggatata	5760
ggtacctgcc	accacgccc	gctaattttg	tatttttagt	agagatgggg	tttcaccatg	5820
ttggtcaggc	tgggtctgaa	ctcctgacct	cagggtgatct	ggcaccttgg	cctcccaaag	5880
tgcggggatt	agaggcatga	gccaccacgc	ccagccttca	tcacatcttg	agagaggaca	5940
ctgtctgcct	cttgctctga	tgagggtctg	atgcaaagga	tagtgagtct	ctacagtga	6000
cacttaagaa	aggcagcatg	tgggtgctca	caggtcaggc	ggaggagggg	gagctggtgg	6060
ggaccaggca	tgcttgtctc	cagatcagga	tatgatggca	ttggtgcaga	ttatatag	6120
atagaatatg	gtctcaggaa	ccaggcagga	ctttggcttc	cgagcagggt	tcagatccca	6180
gcttggccct	acctgtgcag	tgagatctca	agcaagtcag	cctctaagcc	tcaggttctc	6240
cctttgccag	ttcaacagat	gagctggcct	gggtggggt	gtgtggtgat	ggtgctggg	6300
ctgggtcctc	tgcccttgca	ggtggtctat	gttgcccgaa	acccaaagga	cgtggcggtc	6360
tcctactacc	atttccaccg	tatggaaaag	gcgcaccctg	agcctgggac	ctgggacagc	6420
ttcctggaaa	agttcatggc	tggagaaggt	gggcttgact	ggaggaagga	gggtgtgaag	6480
cagaggggtg	gtggctataa	cgtacagcaa	ccctgtgtcg	gtgccccctg	cccgcttctc	6540
tagtgtccta	cgggtcctgg	taccagcag	tgcaggagt	gtgggagctg	agccgcaccc	6600
acctgttct	ctacctcttc	tatgaagaca	tgaaggaggt	gagaccgact	gtgatgcttc	6660
cccccatgtg	acacctgggg	gcaggcacct	cacagggacc	caccaaggcc	acccagcccc	6720
gtccctgggc	ggctcccaca	gcaagcccg	attcccctc	ctacctcct	ggcccaggcc	6780
ccccactgc	agccccacct	ggcagcaggc	tgggcacagc	tttcatcttc	tgcacctgag	6840
tcagctgcat	gggtggccac	ggatcagata	cttagtccta	ttgcttatcc	tcaccaaagg	6900

gtgtgccacc	cagggccaca	gtcatggaag	aagaccatcc	cggtcctcac	ccatagggcg	6960
caagccctgt	tcatgatggg	atcacagggc	agagatcaat	tcattttact	ccagagacta	7020
gggccccagg	ggttgaggct	ctttgggggt	tctaggggaa	gtggccagat	cccctctgag	7080
gttagagagg	gggacccgtt	ttgttttgct	ccatgagga	gccctctgct	gtcagaacc	7140
ccaaaaggga	gattcaaaaag	atcctggagt	ttgtggggcg	ctccctgcca	gaggagacca	7200
tggacttcat	ggttcagcac	acgtcgttca	aggagatgaa	gaagaaccct	atgaccaact	7260
acaccaccgt	cccccaggag	ctcatggacc	acagcatctc	ccccttcatg	aggaaagggtg	7320
ggtgctggcc	agcacggggg	tttggggcg	gtgggagcag	cagctgcagc	ctccccatag	7380
gcacttgggg	cctcccctgg	gatgagactc	cagctttgct	ccctgccttc	ctcccccagg	7440
catggctggg	gactggaaga	ccaccttcac	cgtggcgag	aatgagcgct	tcgatgcgga	7500
ctatgcgagg	aagatggcag	gctgcagcct	cagcttccgc	tctgagctgt	gagaggggct	7560
cctggagtc	ctgcagaggg	agtgtgcgaa	tctaccctga	ccaatgggct	caagaataaa	7620
gtatgatttt	tgagtcaagg	acagtggctc	atgtctgcaa	tcccagcgat	ttgggagggtt	7680
gagctggtag	gacacaata	ggccacgaat	ttgagaccag	cctggtaaaa	tagtgagacc	7740
tcctctctac	aaagatgtaa	aaaaattagc	cacatgtgct	ggcacttacc	tgtagtccca	7800
gctacttggg	aagcagaggc	tggaggatca	tttcagccca	ggagggttg	gatacagtga	7860
gttatgacat	gcccattcac	tacagcctgg	atgacaagca	agaccctccc	tccaaagaaa	7920
ataaagctca	attaaaataa	aatatgattt	gtgttcatgt	agagcctgta	ttggaaagga	7980
agagaaactc	tgagctgaaa	gagtgaatgc	ccggtggggc	cacatatggt	cacctctccc	8040
ccagccttca	gtcccccagg	tcaccatata	tggggagggg	agaagggttt	ggagaagtaa	8100
aaccaggag	atgtgtggag	gggggatgtc	tgtttaatcc	cagcacatcc	tctgctgtcc	8160
tgcccaaga	tgggtggagg	cgtcgagtcc	gccgggcagc	gtcacttttt	cttgggctcc	8220
ttagaagcta	ccaggtacct	ctgggccaca	ctgagatgag	gggagtagcc	gcctgcatag	8280
gaggtgtctt	caaacaggat	agtatagtcc	ctcctggggg	ttgtgggggt	aggtggccaa	8340
ggaagggtag	aggagcaagc	ccccggggct	ggttgtcaac	tcactttgtt	ggctggaatt	8400
ggttgtaact	tgaccacctc	gggcaggatc	ccactgctca	tccccaa		8447

<210> 132

<211> 2191

<212> DNA

<213> Homo sapiens

<220>

<223> beta-glucuronidase (GUSB) precursor;
glucuronidase-beta; beta-D-glucuronoside
glucuronosohydrolase; glucuronohydrolase; beta-G1

<400> 132

ggtggccgag	cgggggaccg	ggaagcatgg	cccgggggtc	ggcgggttgc	tgggcccgcg	60
tcgggcccgt	gttgtggggc	tgcgcgctgg	ggctgcaggg	cgggatgctg	tacccccagg	120
agagcccgtc	gcgggagtg	aaggagctgg	acggcctctg	gagcttccgc	gccgacttct	180
ctgacaaccg	acgccggggc	ttcgaggagc	agtggtagcg	gcggccgctg	tgggagtcag	240
gccccaccgt	ggacatgcca	gttccctcca	gcttcaatga	catcagccag	gactggcgct	300
tgcggcattt	tgtcggctgg	gtgtggtacg	aacgggaggt	gatcctgccg	gagcgatgga	360
cccaggacct	gcgcacaaga	gtggtgctga	ggattggcag	tgcccattcc	tatgccatcg	420
tgtgggtgaa	tggggtcgac	acgctagagc	atgagggggg	ctacctcccc	ttcgaggccg	480
acatcagcaa	cctggtccag	gtggggcccc	tgccctcccc	gctccgaatc	actatcgcca	540
tcaacaacac	actcaccccc	accaccctgc	caccagggac	catccaatac	ctgactgaca	600
cctccaagta	tcccaagggt	tactttgtcc	agaacacata	ttttgacttt	ttcaactacg	660
ctggactgca	gcggtctgta	cttctgtaca	cgacacccac	cacctacatc	gatgacatca	720
ccgtcaccac	cagcgtggag	caagacagtg	ggctggtgaa	ttaccagatc	tctgtcaagg	780
gcagtaacct	gttcaagttg	gaagtgcgtc	ttttggatgc	agaaaacaaa	gtcgtggcga	840
atgggactgg	gaccaggggc	caacttaagg	tgccagggtg	cagcctctgg	tggccgtacc	900
tgatgcacga	acgccctgcc	tatctgtatt	cattggaggt	gcagctgact	gcacagacgt	960
cactggggcc	tgtgtctgac	ttctacacac	tccctgtggg	gatccgcact	gtggctgtca	1020
ccaagagcca	gttcctcatc	aatgggaaac	ctttctattt	ccacgggtgtc	aacaagcatg	1080
aggatgcgga	catccgaggg	aagggtctcg	actggccgct	gctggtgaag	gacttcaacc	1140
tgcttcgctg	gcttggtgcc	aacgttttcc	gtaccagcca	ctacccttat	gcagaggaag	1200
tgatgcagat	gtgtgaccgc	tatgggattc	tggtcatcga	tgagtgtccc	ggcgtggggc	1260
tggcgctgcc	gcagttcttc	aacaacgttt	ctctgcatca	ccacatgcag	gtgatggaag	1320
aagtgggtgcg	tagggacaag	aaccaccccg	cggctcgtgat	gtggtctgtg	gccaacgagc	1380

ctgcggtccca	cctagaatct	gctggctact	acttgaagat	ggtgatcgct	cacaccaa	1440
ccttggaccc	ctcccgcc	gtgaccttg	tgagcaactc	taactatgca	gcagacaagg	1500
gggctccgta	tgtggatgtg	atctgtttga	acagctacta	ctcttgggtat	cacgactacg	1560
ggcacctgga	gttgattcag	ctgcagctgg	ccaccagtt	tgagaactgg	tataagaagt	1620
atcagaagcc	cattattcag	agcgagtatg	gagcagaaac	gattgcaggg	tttcaccagg	1680
atccacctct	gatgttcact	gaagagtacc	agaaaagtct	gctagagcag	taccatctgg	1740
gtctggatca	aaaacgcaga	aaatatgtgg	ttggagagct	catttgggaat	tttgccgatt	1800
tcatgactga	acagtcaccg	acgagagtgc	tggggaataa	aaaggggatc	ttcactcggc	1860
agagacaacc	aaaaagtgca	gcgttccttt	tgcgagagag	atactggaag	attgccaatg	1920
aaaccaggta	tccccactca	gtagccaagt	cacaatgttt	ggaaaacagc	ccgtttactt	1980
gagcaagact	gataccacct	gcgtgtccct	tcctccccga	gtcagggcga	cttcacacagc	2040
agcagaacaa	gtgcctcctg	gactgttcac	ggcagaccag	aacgtttctg	gcctgggttt	2100
tgtggtcatc	tattctagca	gggaacacta	aaggtggaaa	taaaagattt	tctattatgg	2160
aaataaagag	ttggcatgaa	agtcgctact	g			2191

<210> 133
 <211> 2090
 <212> DNA
 <213> Homo sapiens

<220>
 <223> UDP-glucuronosyltransferase 2 family, protein B15 (UGT2B15, UDPGT) precursor; UDP-glucuronosyltransferase 2B8 (UGT2B8) precursor, microsomal (estriol-specific); dihydrotestosterone/ androstanediol UDP-glucuronosyltransferase isoform 3 (UDPGTh-3)

<400> 133						
ttcggcacga	gtaagaccag	gatgtctctg	aaatggacgt	cagtctttct	gctgatacag	60
ctcagttgtt	acttttagctc	tggaaagctgt	ggaaaggtgc	tagtgtggcc	cacagaatac	120
agccattgga	taaatatgaa	gacaatcctg	gaagagcttg	ttcagagggg	tcatgaggtg	180
actgtgttga	catcttcggc	ttctactctt	gtcaatgcc	gtaaatacatc	tgctattaaa	240
ttagaagttt	atcctacatc	tttaactaaa	aatgatttgg	aagattctct	tctgaaaatt	300
ctcgatagat	ggatatatgg	tgtttcaaaa	aatacatttt	ggtcataatt	ttcacaatta	360
caagaattgt	gttgggaata	ttatgactac	agtaacaagc	tctgtaaaaga	tgcagttttg	420
aataagaaac	ttatgatgaa	actacaagag	tcaaagtttg	atgtcattct	ggcagatgcc	480
cttaatccct	gtggtagact	actggctgaa	ctatttaaca	tacctttct	gtacagtctt	540
cgattctctg	ttggctacac	atgttgagaag	aatgggtggag	gatttctgtt	ccctccttcc	600
tatgtacctg	ttgttatgtc	agaattaagt	gatcaaatga	ttttcatgga	gaggataaaa	660
aatatgatac	atatgcttta	ttttgacttt	tggtttcaaa	tttatgatct	gaagaagtgg	720
gaccagtttt	atagtgaagt	tctaggaaga	cccactacat	tatttgagac	aatggggaaa	780
gctgaaatgt	ggctcattcg	aacctattgg	gattttgaat	ttcctcgccc	attcttacc	840
aatgttgatt	ttgttgagg	acttcactgt	aaaccagcca	aacctctgcc	taaggaaatg	900
gaagagtttg	tgcaagctc	tggagaaaat	ggtattgtgg	tgttttctct	ggggtcgatg	960
atcagtaaca	tgtcagaaga	aagtccaac	atgattgcat	cagcccttgc	ccagatccca	1020
caaaaggttc	tatggagatt	tgatggcaag	aagccaaata	cattaggttc	caatactcga	1080
ctgtacaagt	ggttacccca	gaatgacctt	cttgggtcatc	ccaaaaccaa	agcttttata	1140
actcatgggtg	gaaccaatgg	catctatgag	gcgatctacc	atgggatccc	tatgggtggg	1200
attcccttgt	ttgcggatca	acatgataac	attgtctaca	tgaaagccaa	gggagcagcc	1260
ctcagtgtgg	acatcaggac	catgtcaagt	agagatttgc	tcaatgcatt	gaagtgcagtc	1320
attaatgacc	ctgtctataa	agagaatgtc	atgaaattat	caagaattca	tcatgacca	1380
ccaatgaagc	ccctggatcg	agcagtcttc	tggattgagt	ttgtcatgcg	ccacaaagga	1440
gccaaagcacc	ttcgagtcgc	agctcacaac	ctcacctgga	tccagtacca	ctctttggat	1500
gtgatagcat	tcctgtctgg	ctgcgtggca	actgtgatat	ttatcatcac	aaaattttgc	1560
ctgttttgtt	tccgaaagct	tgccaaaaca	ggaaagaaga	agaaaagaga	ttagttatat	1620
caaaagcctg	aagtggaaatg	actgaaagat	gggactcctc	ctttatttca	gcatggaggg	1680
ttttaaatgg	aggatttctt	ttttcctgtg	acaaaacatc	ttttcacaac	ttaccttggt	1740
aagacaaaat	ttattttcca	gggattttaat	acgtacttta	gttggaatta	ttctatgtca	1800
atgattttta	agctatgaaa	aatacaatgg	ggggaaggat	agcatttggg	gatataccta	1860
atgttaaatg	acgagttact	ggatgcagca	cgcaacatgg	cacatgtgta	tacatatgta	1920
gctaaccctt	cgttgtgcac	atgtacccta	aaacttaag	tataatttaa	aaaaagcaaa	1980

aaaaaaaaat accaactctt ttttttaaac caggaaggaa aatgtgaaca tggaacaac 2040
 ttctagtatt ggatctgaaa ataaagtgtc atccaagcca taaaaaaaaa 2090

<210> 134

<211> 1137

<212> DNA

<213> Homo sapiens

<220>

<223> thiosulfate sulfurtransferase (TST);
 thiosulfate:cyanide sulfurtransferase; thiosulfate
 cyanide transsulfurase; thiosulfate
 thiotransferase; rhodanese

<400> 134

```
gaattccggg cgcggcgtcc ggggcgagtg acacgcagag ctgaagccat ggttcacag 60
gtgctctacc gggcgctggt ctccaccaag tggctggcgg agtccatcag gactggcaag 120
ctggggcccg gcctgcgggt gctggacgcg tcctggtact caccaggcac ccgagaggcc 180
cgcaaggagt acctcgagcg ccacgtaccc ggcgctctt tctttgacat agaagagtgc 240
cgggacacgg cgtcgcccta cgagatgatg ctgccagcg aggtggctt cgccgagtat 300
gtgggcccgc tgggcatcag caaccacacg cacgtggtgg tgtatgatgg tgaacacctg 360
ggcagcttct atgtccccg ggtctggtgg atgttccgtg tgtttggcca ccgcaccgta 420
tcagtgtcca atgggtggctt ccggaactgg ctgaaggagg gccaccgggt gacatccgag 480
ccctcacgcc cagaaccggc cgtcttcaaa gccacactgg accgctccct gctcaagacc 540
tacgagcagg tgctggagaa ccttgaatct aagaggttcc agctgggtga ttcaaggtct 600
caagggcggg tcctgggcac cgagccggag ccggatgcag taggactgga ctcgggccat 660
atccgtggtg ccgtcaacat gcttttcatg gacttctga ctgaggatgg cttcgagaag 720
ggcccagaag agctccgtgc tctgttccag accaagaagg tggatctctc gcagcctctc 780
attgccacgt gccgcaaggg agtcaccgcc tgccacgtgg ccttggtgc ctacctctgc 840
ggcaagcctg atgtggccgt gtacgatggc tcctggtccg agtgggttcc cggggccccc 900
ccagagagcc gtgtgtccca gggaaagtct gagaaggcct gagccgtgac ctcttctgct 960
tactgtaaact gcggccggtt tagtgacccc atgacttaca gccggttctt acctcttagg 1020
tgaaggagat gacatgtttt ttagaattgc tgtgcaaggc tcacctctc tctgtcaaca 1080
ctggaataaa ctttgccttt tctgaaaaaa aaaaaaaaaa aaaaaaacc ggaattc 1137
```

<210> 135

<211> 3494

<212> DNA

<213> Homo sapiens

<220>

<223> aminopeptidase N (ANPEP, PEPN, APN) precursor; membrane alanine
 aminopeptidase precursor; alanyl (membrane) aminopeptidase;
 microsomal aminopeptidase; aminopeptidase M; CD13 antigen;
 p150; IGF1R

<400> 135

```
taatttttgc ccagtctgcc tgttgtgggg ctctctccct ttggggatat aagcccggcc 60
tggggctgct ccgttctctg cctggcctga ggctccctga gccgctccc caccatcacc 120
atggccaagg gcttctatat ttccaagtcc ctgggcatcc tggggatcct cctgggcgtg 180
gcagccgtgt gcacaatcat cgcactgtca gtgggtgtact ccaggagaa gaacaagaac 240
gccaacagct ccccgctggc ctccaccacc ccgtccgct cagccaccac caaccggcc 300
tcggccacca ccttggacca aagtaaagcg tggaatcggt accgcctccc caacacgtg 360
aaacccgatt cctaccaggt gacgtgaga ccgtacctca cccccaatga caggggctg 420
tacgttttta agggctccag caccgtccgt ttcacctgca aggaggccac tgacgtcatc 480
atcatccaca gcaagaagct caactacacc ctacagccagg ggcacagggt ggtcctgctg 540
ggtgtgggag gctcccagcc ccccgacatt gacaagactg agctggtgga gccaccgag 600
tacctggtgg tgcacctcaa gggctccctg gtgaaggaca gccagtatga gatggacagc 660
gagttcgagg gggagtggc agatgacctg gcgggcttct accgcagcga gtacatggag 720
ggcaatgtca gaaaggtggg ggccactaca cagatgcagg ctgcagatgc ccggaagtcc 780
ttcccatgct tcgatgagcc ggccatgaag gccgagttca acatcacgct tatccacccc 840
```

```

aaggacctga cagccctgtc caacatgctt cccaaaggtc ccagcacccc acttccagaa 900
gaccccaact ggaatgtcac tgagttccac accacgccc aagatgtccac gtacttgctg 960
gccttcattg tcagtgagtt cgactacgtg gagaagcagg catccaatgg tgtcttgatc 1020
cggaatctggg cccggcccag tgccattgctg gggggccacg gcgattatgc cctgaacgtg 1080
acgggccccca tccttaactt ctttgctggg cattatgaca caccctaccc actcccaaaa 1140
tcagaccaga ttggcctgcc agacttcaac gccggcgcca tggagaactg gggactgggtg 1200
acctaccggg agaactccct gctgttcgac cccctgtcct cctccagcag caacaaggag 1260
cgggtgggtca ctgtgattgc tcatgagctg gccaccagt ggttcgggaa cctggtgacc 1320
atagagtggg ggaatgacct gtggctgaac gagggcttcg cctcctacgt ggagtacctg 1380
ggtgctgact atgcggagcc cacctggaac ttgaaagacc tcatgggtgct gaatgatgtg 1440
taccgcgtga tggcagtgga tgactggcc tcctccacc cgctgtccac accgcctcg 1500
gagatcaaca cgccggccca gatcagtgag ctgtttgacg ccatctccta cagcaagggc 1560
gcctcagtc tcaggatgct ctccagcttc ctgtccgagg acgtattcaa gcagggcctg 1620
gcgtcctacc tccacacctt tgccctacc aacaccatct acctgaacct gtgggaccac 1680
ctgcaggagg ctgtgaacaa ccggtccatc caactccca ccacgtgctg ggagaccac 1740
aaccgctgga ccctgcagat gggcttcccc gtcatacagg tggataccag cacggggacc 1800
ctttcccagg agcacttcct ccttgacccc gattccaatg ttaccgccc ctcagaattc 1860
aactacgtgt ggattgtgcc catcacatcc atcagagatg gcagacagca gcaggactac 1920
tggctgatag atgtaagagc ccagaacgat ctcttcagca catcaggcaa tgagtgggtc 1980
ctgctgaacc tcaatgtgac gggctattac cgggtgaact acgacgaaga gaactggagg 2040
aagattcaga ctgagctgca gagagaccac tcggccatcc ctgtcatcaa tcgggcacag 2100
atcattaatg acgccttcaa cctggccagt gccataagg tccctgtcac tctggcgctg 2160
aacaacaccc tcttcctgat tgaagagaga cagtacatgc cctgggaggc cgccctgagc 2220
agcctgagct acttcaagct catgtttgac cgctccgagg tctatggccc catgaagaac 2280
tacctgaaga agcaggtcac acccctcttc attcacttca gaaataatac caacaactgg 2340
agggagatcc cagaaaacct gatggaccag tacagcgagg ttaatgccat cagcaccgcc 2400
tgctccaacg gagttccaga gtgtgaggag atggtctctg gccttttcaa gcagtggatg 2460
gagaacccca ataataaccc gatccacccc aacctgcggt ccacgtcta ctgcaacgct 2520
atcgcccagg gcggggagga ggagtgggac ttcgcctggg agcagttccg aaatgccaca 2580
ctggatcaat aggttgacaa gctccgggca gccctggcct gcagcaaaga gttgtggatc 2640
ctgaacaggt acctgagcta caccctgaac ccggacttaa tccggaagca ggacgccacc 2700
tctaccatca tcagcattac caacaacgct attgggcaag gtctggctctg ggactttgtc 2760
cagagcaact ggaagaagct ttttaacgat tatggtggtg gctcgttctc cttctccaac 2820
ctcatccagg cagtgcacag acgattctcc accgagtatg agctgcagca gctggagcag 2880
ttcaagaagg acaacgagga aacaggcttc ggctcaggca cccgggcccct ggagcaagcc 2940
ctggagaaga cgaaagccaa catcaagtgg gtgaaggaga acaaggaggt ggtgctccag 3000
tggttcacag aaaacagcaa atagtcccca gcccttgaa gtcacccggcc ccgatgcaag 3060
gtgcccacat gtgtccatcc cagcggctgg tgcagggcct ccattcctgg agcccaggc 3120
accagtgtcc tcccctcaag gacaaagtct ccagcccacg ttctctctgc ctgtgagcca 3180
gtctagtctc tgatgaccca ggctgctga gcacctcca gccctgccc ctcatgccaa 3240
ccccgcccta ggctggcat ggcacctgct gccagtgcc ctggggctga tctcagggaa 3300
gccagctcc agggccagat gagcagaagc tctcgatgga caatgaacgg ccttgctggg 3360
ggccgccctg taccctcttt cacctttccc taaagaccct aaatctgagg aatcaacagg 3420
gcagcagatc tgtatatttt tttctaagag aaaatgtaaa taaaggattt ctagatgaaa 3480
aaaaaaaaa aaaa 3494

```

<210> 136

<211> 1815

<212> DNA

<213> Homo sapiens

<220>

<223> protective protein for beta-galactosidase (PPGB,
PPR) precursor; beta-galactosidase 2;
carboxypeptidase C precursor; lysosomal protective
protein; cathepsin A precursor

<400> 136

```

ggggagatga tccgagccgc gccgcccgcg ctgttctctg tgctgctgct gctgctgctg 60
ctagtgtcct gggcgctccc aggcgaggca gccccgacc aggcagagat ccagcgctc 120
ccggggctgg ccaagcagcc gtctttccgc cagtactccg gctacctcaa aagctccggc 180

```

tccaagcacc	tccactactg	gtttgtggag	tcccagaagg	atcccagagaa	cagccctgtg	240
gtgctttggc	tcaatggggg	tcccggctgc	agctcactag	atgggctcct	cacagagcat	300
ggccccttcc	tggtccagcc	agatgggtgc	accctggagt	acaacccta	ttcttggat	360
ctgattgcca	atgtgttata	cctggagtcc	ccagctggg	tggtcttctc	ctactccgat	420
gacaagtttt	atgcaactaa	tgacactgag	gtcgcccaga	gcaattttga	ggcccttcaa	480
gattttcttcc	gcctctttcc	ggagtacaag	aacaacaaac	ttttcctgac	cggggagagc	540
tatgctggca	tctacatccc	caccctggcc	gtgctggtca	tgcaggatcc	cagcatgaac	600
cttcaggggc	tggtctgtgg	caatggactc	tcctcctatg	agcagaatga	caactccctg	660
gtctactttg	cctactacca	tggccttctg	gggaacaggc	tttggctctc	tctccagacc	720
cactgctgct	ctcaaaaaca	gtgtaacttc	tatgacaaca	aagacctgga	atgcgtgacc	780
aatcttcagg	aagtggcccc	catcggtggc	aactctggcc	tcaacatcta	caatctctat	840
gccccgtgtg	ctggaggggt	gccagccat	tttaggtatg	agaaggacac	tggtgtggtc	900
caggatttgg	gcaacatctt	cactcgctgc	ccactcaagc	ggatgtggca	tcaggcactg	960
ctgcgctcag	gggataaagt	gcgcatggac	ccccctgca	ccaacacaa	agctgcttcc	1020
acctacctca	acaaccgta	cgtgcggaag	gccctcaaca	tcccggagca	gctgccacaa	1080
tgggacatgt	gcaactttct	ggtaaaactta	cagtaccgcc	gtctctaccg	aagcatgaac	1140
tcccagtatc	tgaagctgct	tagctcacag	aaataccaga	tcctattata	taatggagat	1200
gtagacatgg	cctgcaattt	catgggggat	gagtggtttg	tggtattccct	caaccagaag	1260
atggaggtgc	agcgccggcc	ctggttagtg	aagtacgggg	acagcgggga	gcagattgcc	1320
ggcttcgtga	aggagtcttc	ccacatcgcc	tttctcacga	tcaagggcgc	cggccacatg	1380
gttcccaccg	acaagcccct	cgctgccttc	accatgttct	cccgttctct	gaacaagcag	1440
ccatactgat	gaccacagca	accagctcca	cggcctgatg	cagcccctcc	cagcctctcc	1500
cgctaggaga	gtcctcttct	aagcaaagtg	cccctgcagg	cggttctctg	cgccaggact	1560
gcccccttcc	cagagccctg	tacatcccag	actgggcccc	gggtctccca	tagacagcct	1620
gggggcaagt	tagcaacttta	ttcccgcagc	agttcctgaa	tggggtggcc	tgcccccttc	1680
tctgcttaaa	gaatgccctt	tatgatgcac	tgattccatc	ccaggaaccc	aacagagctc	1740
aggacagccc	acagggaggt	ggtggacgga	ctgtaattga	tagattgatt	atggaattaa	1800
attgggtaca	gcttc					1815

<210> 137

<211> 584

<212> DNA

<213> Homo sapiens

<220>

<223> fatty acid binding protein 6 (FABP6); gastropin
(GT) isoform 1; ileal lipid-binding protein (ILBP,
Il1bp); ileal bile acid binding protein (I-BABP);
intestinal 15 kDa protein (I-15P)

<400> 137

gaagaagtgg	ggtgacttag	gggctgagcc	tcagcaactg	ggagagttta	taagctggga	60
tagcagaccc	ctcagcacca	cccattctcc	tcctccctct	gtctctctggc	ctccagcctc	120
ccagcagcat	ggctttcacc	ggcaagtctg	agatggagag	tgagaagaat	tatgatgagt	180
tcatgaagct	ccttgggatc	tccagcgatg	taatcgaaaa	ggcccgcac	ttcaagatcg	240
tcaaggaggt	gcagcaggat	gggcaggact	tcacttggtc	ccagcactac	tccggggggc	300
acaccatgac	caacaagttc	actgttggca	aggaaagcaa	catacagaca	atggggggca	360
agacgttcaa	ggccactgtg	cagatggagg	gcgggaagct	ggtggtgaat	ttccccaact	420
atcaccagac	ctcagagatc	gtgggtgaca	agctggtgga	ggtctccacc	atcgaggcg	480
tgacctatga	gcgcgtgagc	aagagactgg	cctaagcagc	caggcccggc	ccagggagct	540
acaaaccac	caataaaaact	gatataagga	caaaaaaaaa	aaaa		584

<210> 138

<211> 634

<212> DNA

<213> Homo sapiens

<220>

<223> fatty acid binding protein 4, adipocyte (FABP4);
adipocyte lipid-binding protein (ALBP); aP2; p15

<400> 138
 ggaattccag gaggggtgcag cttccttctc accttgaaga ataatcctag aaaactcaca 60
 aaatgtgtga tgctttttgta ggtacctgga aacttgtctc cagtgaaaac tttgatgatt 120
 atatgaaaga agtaggagtg ggcttttgcca ccaggaaagt ggctggcatg gccaaaccta 180
 acatgatcat cagtgtgaat ggggatgtga tcaccattaa atctgaaagt acctttaaaa 240
 atactgagat ttccttcata ctgggccagg aatttgacga agtcactgca gatgacagga 300
 aagtcaagag caccataacc ttagatgggg gtgtcctggg acatgtgcag aaatgggatg 360
 gaaaatcaac caccataaag agaaaacgag aggatgataa actggtggtg gaatgcgtca 420
 tgaaaggcgt cacttccacg agagtttatg agagagcata agccaaggga cgttgacctg 480
 gactgaagtt cgcattgaac tctacaacat tctgtgggat atattgttca aaaagatatt 540
 gttgttttcc ctgatttagc aagcaagtaa ttttctccca agctgatttt attcaatatg 600
 gttacgttgg ttaaataact ttttttagat ttag 634

<210> 139
 <211> 489
 <212> DNA
 <213> Homo sapiens

<220>
 <223> fatty acid binding protein 1, liver (FABP1, FABP2,
 L-FABP); fatty acid binding protein, hepatic; Z
 protein; sterol carrier protein

<400> 139
 agagccgcag gtcagtcgtg aagagggagc tctattgcca ccatgagttt ctccggcaag 60
 taccaactgc agagccagga aaactttgaa gccttcatga aggcaatcgg tctgccggaa 120
 gagctcatcc agaaggggaa ggatatcaag ggggtgtcgg aaatcgtgca gaatgggaag 180
 cacttcaagt tcaccatcac cgctgggtcc aaagtgatcc aaaacgaatt cacggtgggg 240
 gaggaatgtg agctggagac aatgacaggg gagaaagtca agacagtggg tcagttggaa 300
 ggtgacaata aactggtgac agctttcaaa aacatcaagt ctgtgaccga actcaacggc 360
 gacataatca ccaattaccat gacattgggt gacattgtct tcaagagaat cagcaagaga 420
 atttaaacaa gtctgcattt catattattt tagtgtgtaa aattaatgta ataaagtga 480
 ctttgtttt 489

<210> 140
 <211> 882
 <212> DNA
 <213> Homo sapiens

<220>
 <223> delta3, delta2-CoA-isomerase (DCI);
 delta(3)-delta(2)-enoyl-CoA isomerase;
 dodecenoyl-CoA delta-isomerase precursor,
 mitochondrial; 3,2-trans-enoyl-CoA isomerase

<400> 140
 gacggcgcca ggcggttcgg gagccagcgg gtgctggtgg agccggacgc gggcgccaggg 60
 gtcgctgtga tgaaattcaa gaacccccca gtgaacagcc tgagcctgga gtttctgacg 120
 gagctggtca tcagcctgga gaagctggag aatgacaaga gcttccgcgt tgtcattctg 180
 acctcggacc gcccggtgtg cttctcggcc ggcctggacc tgacggagat gtgtgggagg 240
 agccccgcc actacgctgg gtactggaag gccgttcagg agctgtggct gcggttgtag 300
 cagtccaacc tgggtgctgg ctccgccatc aacggagcct gccccgctgg aggctgcctg 360
 gtggccctga cctgtgacta ccgcctcctg gcggacaacc ccaggactg cataggactc 420
 aatgagaccc agctgggcat catcgcccct ttctggttga aagacaccct ggagaacacc 480
 atcgggcacc gggcgccgga gtctgcccct gagctggggc tgctcttccg ccggccggag 540
 gccctgcagg tgggcatagt cgaccaggtg gtcccggagg agcaggtgca gagcactgcg 600
 ctgtcggcga tagcccagtg gatggccatt ccagaccatg ctcgacagct gaccaaggcc 660
 atgatgcgaa aggccacggc cagccgcctg gtcacgcagc gcgatgcgga cgtgcagaac 720
 ttcgtcagct tcactctcaa agactccatc cagaagtccc tgcagatgta cttagagagg 780
 ctcaaagaag aaaaaggcta agcattgggc tgccacaggc ttagcgccac acgtgcccct 840
 gtgtccagga ggtcttaaac aaggatattt tcaacttaaa aa 882

<210> 141
 <211> 1584
 <212> DNA
 <213> Homo sapiens

<220>
 <223> acetyl-CoA acyltransferase 2 (ACAA2);
 mitochondrial 3-oxoacyl-CoA thiolase;
 3-ketoacyl-CoA thiolase, mitochondrial;
 beta-ketothiolase; T1

<400> 141
 gcgtccccc caccacagac ccgcgcgcgc gaagacccag cagccgccat gcgtctgctc 60
 cgaggtgtgt ttgtagttgc tgctaagcga acgccctttg gagcttacgg aggccttctg 120
 aaagacttca ctgctactga cttgtctgaa tttgctgcc aaggctgcctt gtctgctggc 180
 aaagtctcac ctgaaacagt tgacagtgtg attatgggca atgtcctgca gaggctcttca 240
 gatgctatat atttggcaag gcatgttggt ttgcgtgtgg gaatcccaaa ggagacccca 300
 gctctcacga ttaataggct ctgtggttct gggttttcagt ccattgtgaa tggatgtcag 360
 gaaattttgt ttaaagaagc tgaagtgttt ttatgtggag gaaccgaaag catgagccaa 420
 gctccctact gtgtcagaaa tgtgcgtttt ggaaccaagc ttggatcaga tatcaagctg 480
 gaagattctt tatgggtatc attaacagat cagcatgtcc agctcccat ggcaatgact 540
 gcagagaatc ttactgtaaa acacaaaata agcagagaag aatgtgacaa atatgccctg 600
 cagtcacagc agagatggaa agctgctaata gatgctggct actttaatga tgaatggca 660
 ccaattgaag tgaagacaaa gaaaggaaaa cagacaatgc aggtagacga gcatgctcgg 720
 ccccaaacca ccctggaaca gttacagaaa ctctctccag tattcaagaa agatggaact 780
 gttactgcag ggaatgcac gggtgtagct gatgggtctg gagctgttat catagctagt 840
 gaagatgctg ttaagaaaca taacttcaca ccactggcaa gaattgtggg ctactttgta 900
 tctggatgtg atccctctat catgggtatt ggtcctgtcc ctgctatcag tggggcactg 960
 aagaaagcag gactgagtct taaggacatg gatttggtag aggtgaatga agcttttgc 1020
 ccccgactact tggctgttga gaggagtgtg gatcttgaca taagtaaaac caatgtgaat 1080
 ggaggagcca ttgctttggg tcacccactg ggagatctg gatcaagaat tactgcacac 1140
 ctggttcacg aattaaggcg tcgagggtga aaatatgccg ttggatcagc ttgcatggga 1200
 ggtggccaag gtattgctgt catcattcag agcacagcct gaagagacca gtgagctcac 1260
 tgtgacccat cttactcta cttggccagg ccacagtaaa acaagtgacc ttcagagcag 1320
 ctgccacaac tggccatgcc ctgccattga aacagtgatt aagtttgatc aagccatgg 1380
 gacacaaaaa tgcattgatc atgaatagga gcccatgcta gaagtacatt ctctcagatt 1440
 tgaaccagtg aaatatgatg tttttctgag ctaaaactca actatagaag acattaaaag 1500
 aaatcgtatt cttgccaagt aaccaccact tctgccttag ataatatgat tataaggaaa 1560
 tcaataaat gttgccttaa cttc 1584

<210> 142
 <211> 9127
 <212> DNA
 <213> Homo sapiens

<220>
 <223> 3-beta hydroxysteroid dehydrogenase type II (HSD3B2);
 5delta-4delta isomerase; 3-beta isomerase 2; hydroxy-delta-5
 steroid dehydrogenase; steroid delta-isomerase 2; 3beta-hydroxy
 delta5-steroid dehydrogenase multifunctional protein II

<400> 142
 ttaataaaca ttaagccaa taataaaaat aatgaaaatc atgaaataga aaaatgaaca 60
 aacaatagag acaatcagtgt gtcaattttt ctgtactcca tgaacaaaac ttcagttcag 120
 aatgatttta tatttaaaata tatatccaga atcacaaaaga tcttagaaga aaaaattagg 180
 aaaatatagg aataaagtgg gaactctgtg ggaataaaaa tcagaaagta attgcctacc 240
 aggtaaactc gggggagggc aggcaattga ctaagaacag gcagataaaa ctttctggag 300
 tgaaggaaat ggtggtcttc ttttcgttgg tacttacatg gacatatata actgtcaagg 360
 ttcattgaca atgaacactt aagtgtacac tgaacgctta agatctgggc cttgtaatgc 420
 ccagattaca tctacttaaa aaaactacat ctctattttt ttaagtagag aaaagtgtct 480
 tggggagttt atggcagtga tgtttgggca gactggggca taggtttcag aagcattcat 540

agcatcttca	gttcaacaat	ttgctaagaa	tggttttgca	gccaaaaatg	taagatgagt	600
gcaaatatct	atgatttagag	tcattgggca	tacaactaca	aatccccaca	cttgtattac	660
aggccatatg	attaattcgt	tatcactaga	tacctttcct	tcaatgaggt	tcttccatta	720
ggaaccacga	gctctccagg	gaaaaattgc	aattgaggtt	ttggatataat	tgggtggaaa	780
agaaagtcac	ctcacataaa	acttagtgat	tggagctgtc	accattgaaa	atttctaaac	840
tttgcaagac	agcagtgcag	tttcaaatga	cactctcaga	gagttgataa	tgggctaaaa	900
tagatctccc	tccaggtgga	tttactgtac	aaggacaaca	tttacattgc	acttgagac	960
ttctcccagt	ttggtttaag	ttcacagatt	gcagatccca	gacagctggg	atcaactgac	1020
cagtgttctg	ttaaggctaa	agccaagact	ctttatcaca	ctgtggcctt	aagattggat	1080
ttctcttcct	gttcctggga	agaatttagag	atataaccta	aaggtcacta	ttattctgag	1140
aaaagggatt	ctggaggagg	agggagcaat	gagtatgtgg	caggagttca	aggtaataag	1200
ggctgagaca	caagccacag	agcataaagc	tccagtcctt	cctccaggga	tgaggcagta	1260
aggacttgga	ctcctctgtc	cagcttttaa	caatctaagt	tacggttaga	gctttctcct	1320
tttctttcaa	ctactcctgg	cagttgtggg	gtcatggaat	ttttgtaaaa	aatgggggtg	1380
aggaaaataa	ggcatctgct	gagtgtataa	ccattttacc	tcttggtttt	agccctcttc	1440
tgggtcacgc	tagaatcaga	tctgctctcc	agcatcttct	gtttcctggc	aagtgtttcc	1500
tgctactttg	gattggccac	gatgggctgg	agctgccttg	tgacaggagc	aggagggctt	1560
ctgggtcaga	ggatcgtccg	cctgttggtg	gaagagaagg	aactgaagga	gatcaggggc	1620
ttggacaagg	ccttcagacc	agaattgaga	gaggaatttt	ctagtaagta	aacttgagtc	1680
atgggtctgt	ggctccatct	taaactctgc	atgggtgtgg	ggagggtgac	cttgtctagc	1740
aagttaagga	aagttgtagc	caaatgaaag	ccagtcacac	atctaaagtc	atcagaaaag	1800
aaatagaata	aaatgggtata	gtgtgaaaga	tactggatgg	ggtgtccaga	gactggattc	1860
tggccctgac	gcagaacttg	agaggcagcc	atgtcagcct	caaggcccct	tttcttctct	1920
tctagagagt	cacacatgag	ttctccttct	tgtctacaac	tcttatgttc	tgaagctttt	1980
tgtcttggcg	attgctgtgc	gacattcaca	aaggacatca	tttacctgga	gacctcacca	2040
gtgggtcctg	cctgtctaga	ctgccccagg	cttcatttca	ttttatagct	tccttagtat	2100
ctttagttag	ggcaaaataa	aaggaagtga	aggtacggat	gtgtgtgtaa	ttgtgtgtgt	2160
gtgtcagaca	gagaaagaaa	atgaggggga	aagaagggtca	gagacagaga	atgagaaaga	2220
cagagaatga	atgagaaaga	tagtgtgagg	gagagcatca	gcaagagaga	gagagtgaag	2280
gtgagagaga	tcatcagtga	gagagagaga	aagagagaaa	gagagcatgc	acaagtgcac	2340
agcacagagc	agagacagag	taaaaggcag	tatgaggcca	acatgcctca	tttatatttc	2400
tcatatatag	cctttttaaa	aaaaaacctt	tgtatctgtt	tgttcaatac	tccaaataaa	2460
ttgactgcag	aatttgcctg	agtaactctt	tgtgcaataa	accctgtgag	gaaggtagaa	2520
aaggggtcac	ctccaactgg	acaatgaacc	catcaagttc	cagaaacata	aagttacttg	2580
ccaagaacag	ctgattaatg	tgtagcagag	ctcagaccag	agcttcattc	cagaagcttc	2640
atcacttgac	ccccgggcta	atccttggtg	ggtcttcagt	ctctcccttt	gcctctctgt	2700
gtgccccaaa	ccaattccat	gttttccctc	caaccaggga	gactggggga	actatgtatc	2760
ttcttcatgc	aggttctggc	tgcttagaag	gtcctgcctc	gttcacacag	aagctcccct	2820
tgacactctc	ctcttctttc	actcttctct	gacctcttta	aatgtccaat	ttcctccact	2880
ctctgttcta	atagtgaaca	gatattaaca	catgactgat	attaaatggt	tgtaatcctt	2940
atgtctcagc	aatatttaca	atctaacatc	tgataccagg	aaaaagcaat	gctcagtcta	3000
gaggaagagt	tctgctatgg	tgaaaatgca	gggagcataa	tggatgggca	gggcctgtat	3060
gaagataaaa	acagagaatc	ctttcagtg	tctttctgtg	ccaggcactg	tgctaaaggt	3120
tttgcatgtg	ctgactcatt	tacttcccat	aacaacccta	tgagatgggt	aatactatta	3180
tctctctttt	ttatagatga	ggagacagac	acagagaggt	taatcaactt	gtcgaagggtc	3240
ccaagttaga	ttacggcaaa	gctggatttg	aatccaggca	gtctagtgca	gcttctgtgc	3300
tcttaagtag	tagtttgtct	agcagcttct	ctgagcctcc	ctccagccca	acacacaaca	3360
caaaagcaac	tgaatttagt	ctacatgaaa	cacttgccaa	gtccacagtg	ccttgaggaa	3420
ggagggagct	aagactccat	caaaaattgc	gcttttctgg	tctctctaga	tccatggaaa	3480
ctcaccgggg	aagagtcatt	ttctatcggc	tttggacttc	tgctatgaaa	tggcaattcc	3540
tttgagccag	tctgtctaaa	gtcggcagca	aaggagaagc	agatgaaggg	agtgaagaa	3600
gtagaggtgg	aaatacaacc	agagaaaatt	ccactctcgg	ggctgacacc	cacctcctcc	3660
ccagcagcct	cttccctgcc	tccaccattc	cagggccttc	ttggagttgc	ctgacagtg	3720
gaaggggctg	ggagtagaca	aaacaaggca	gaggcatcag	gagagcaaat	ggtcctgcct	3780
gtaaccagag	aaggaatttc	tccagccttg	aatttttcat	tctgaatttc	gctctcactg	3840
ttctttggcc	tttgtgggca	ttttcagtta	aactggctta	ttcttactct	ttctcagaaa	3900
agttgattct	aaacagctat	tctgtcacct	ggggtacagg	gtacaaaaat	ggcaggtgga	3960
atgggcaggt	ttgagccttc	actagaaaa	tgactttaga	tctgtccctt	aacctctctg	4020
agcctcagtt	tctcaccaa	taaagtggga	ctcagaatac	ctacctcacg	agatagctgt	4080
aaaaggaaat	aagcaagctg	tgagccgtat	gcagattata	aagcacaat	gagtgtagag	4140
tatttatctg	agctccatgt	agcatggtgt	tcattttgtg	ggctaattcc	aggtgacaac	4200

tttaccggca	gcgtcactac	ctgtggattt	cagaggagcc	tgaagatatg	gatgttacat	4260
ccgctgccct	tggctagaca	ttagacagct	gagatgtag	ttcattggtg	gctaactcat	4320
tttcagcatt	gctatctgct	ttttatgata	tctgataaaa	gtttctcaat	gaaattaatc	4380
atttaagccc	atctgcaatt	cctgagtaat	ggctccactc	tcctcccagt	tgcccaagca	4440
ggaaactgta	agggtgattt	tgtctccttt	tcctctcatc	ccagctccag	taggtaccag	4500
gaccttcaag	gtgaggtctg	aaattcaaac	ctggagtgca	tctctcccct	cctctgcttc	4560
cactgctgga	ccctggttcc	agtcctcatc	taaacttttg	cacagacatt	ctgattaatc	4620
tcttgatcac	ctggctttct	catttcccct	ataccagtct	gttttatatc	ctcaagccaa	4680
ggtaaaacttc	ctacgccaca	actctgcgtc	tgtttatctt	ttattattat	tactattatt	4740
attattatta	ttattattat	tattttgaga	caggggtctt	ctctgccact	gaggctagca	4800
tgcagtggca	tgatctcaat	tcactgcaac	ctccacctcc	cagactccat	ccatcctcct	4860
gcttcaggtt	tgtgattagc	tgggactata	ggcacatacc	atcacgccca	gctaattttt	4920
gtaatttttag	taaagacagg	gttttgccat	gttttccagc	cagacctcca	cctccagaaa	4980
tcaagtgatt	caccacctca	gagtcctaaa	gagctggaat	tacaggaatg	agccactgca	5040
cccggcctgt	ttctctactt	attccaacat	aaataagggt	ttttctttga	catgggtctg	5100
gagacccaaa	atcataattc	tatacatgat	tcctcatcgc	ctacagaatt	aaattcaaac	5160
tttccctctt	ataccoaact	ctccacaatc	actctattct	ccataaaaaa	tttggtgagt	5220
ctcccatgac	tctagcaatg	cttatatttc	acggatgtgt	gacaattcac	tgctcacatt	5280
acttttctgg	aataagatgg	ggtagaaaca	gatgtttgct	ctttcccaat	aaactgctac	5340
acatgctgat	ttctgtgctt	ttgtttactt	gttcctttta	tgggaatgtag	tacaccctcc	5400
actctaatac	ccacactcta	atctctttga	gcacctatgt	aacatcgctt	ttatcagaaa	5460
acttcccagc	cagatccaga	aatctttcca	atgacctgac	ctgtgttcac	acagagctcc	5520
agaacaggac	caagctgact	gtacttgaag	gagacattct	ggatgagcca	ttcctgaaaa	5580
gagcctgcca	ggacgtctcg	gtcgtcatcc	acaccgcctg	tatcattgat	gtctttgggtg	5640
tcactcacag	agagtcctatc	atgaatgtca	atgtgaaagg	tacagtagcc	tggggaggag	5700
ataaaacaag	ttggttaaat	gaggatcaga	aagaaggaca	agaaagggaa	gagaagtcac	5760
tccattgaac	acctgctgag	ctcttgccca	agtgcctttg	ctgatcacta	ctgactgggg	5820
agttcaaggc	tggtaacctc	agtttttttag	atgagaaaac	tagggctgag	agacagcaag	5880
taacttgtcc	aaggccccaa	aagtaagtaa	gtaagtagga	gagttagact	ttaaactcac	5940
tctgtgtga	ctccaaaggc	tgtggaagct	ctttctactg	tggccccaat	caaaagtcaa	6000
ctaaactcca	acttcaaatt	cacgatatac	agctactcct	tggctccccg	ggccagaatc	6060
agaccttcca	ggtgccacca	tagtcatcat	tttgaacctt	gtgtgtaggc	tgatgagaac	6120
attcagagtc	ttcctgccca	cctcaaagaa	gtcctctcaa	gagaactagc	aaagctggtt	6180
cacagaggtc	tgtcaggaca	gaattatcca	gcacatgcct	tcccataata	ttttcttaac	6240
aaaaagagtt	tcccagtgct	cagaatacaa	tctcttcagc	tcaccacagg	gtctactatt	6300
acagagccat	ttcctgcccag	gtgcccacaa	tgcacctca	tttgatccac	atttttttaa	6360
ggaatcttgc	catgcagtct	caccctctga	ttcccagagc	ccagtctctt	caaaacacag	6420
ctccccactg	ctggcctgac	cctccacatt	cagactaccc	aaactccttt	tataaagcaa	6480
ctaattgctt	ttgagtctcc	agcactgtct	aaaaaaaaca	acaaaaaaa	aacctttcca	6540
gtttctacat	agccataccc	ctaagtaccg	ctatagtcca	aggagtgtgc	taagagtga	6600
tagttttttg	ttttaatttt	gactttccac	agctcccaaa	aacaagggat	aagaaatgac	6660
aaggggagtg	ttagaggcgt	ctgtttctta	aaaccattat	cactcccggg	cttagaaaa	6720
acttcacaat	gatggccatt	tcagtaggct	gtctctccag	aaactcaaat	tgcacagaga	6780
ctttaaaagt	ggctaagaat	acaaaataag	taaataaaaa	tgatcctttg	cctaggaaat	6840
tccttccttc	ttcaagggaa	gacactccag	atacctccat	gagctttgct	tccacacagc	6900
tcaggtgatg	ctgacaggtc	ttcccagtg	aggtgttatc	agcagagggc	acactccctc	6960
cccagtcctc	caccaggctc	cacaggaaat	gccagggcag	gatttaaagg	aagggtttatc	7020
acccccactt	tatataaactg	ggtaacagag	tcatagccag	aattggaagc	agctttttcca	7080
gggaacacac	aatcaggaaa	ggagtgtggg	tttccagcat	ctccccacaa	cccactgttt	7140
gctcgatgac	tccagggatg	gtctttgtga	caaagtttta	ttaatccatt	gcaaaatgag	7200
aaaaatacca	gcaattctat	gtatatctaa	gagtgatat	tgccctatatt	caactgtgaa	7260
tttgtgtgtg	taacacaaat	tcttccactg	ccctttcttg	cctaaggact	gattgggact	7320
gttcatattc	tcagagtata	gcctcctgat	tttttagatt	ttaaatgac	tgtctttta	7380
tgtattgatg	acaaatcata	ctttttcaat	atccttactt	ggcaaaaaat	aaagtgatta	7440
ccctaggtcc	ttttccaaaa	ttaaagtgtg	tgtgtatata	tatatatgta	tatatatatg	7500
tatatatata	tatgtatata	tatgtatata	tatatatgta	tatatatatg	tatatatata	7560
tgtatatata	tatgtatata	tatatatatt	ataatatata	tatatatata	cacacacgta	7620
tacatacaca	cacacacaca	cacaccacac	acaaacatag	gtccatgaaa	cccaaaagtc	7680
tagaaattct	tgctttctag	aacccaaatg	tcagtttctt	tttatttttg	tggttttctt	7740
acggctgtat	catgacccaa	tctcagtcag	agccacagaa	gaatgcaccc	tgagtctgtt	7800
ataaccactg	cacttgggag	tggggagtg	ggcacatgga	tctgtgcatg	tgggtgcagc	7860

tcctttggga	tatttcctga	cactgtcate	atgctcttcg	tgggcaggta	cccagctact	7920
gttggaggcc	tgtgtccaag	ccagtgtgcc	agtcttcac	tacaccagta	gcatagaggt	7980
agccgggccc	aactcctaca	aggaaatcat	ccagaacggc	cacgaagaag	agcctctgga	8040
aaacacatgg	cccactccat	acccgtacag	caaaaagctt	gctgagaagg	ctgtgctggc	8100
ggctaattggg	tggaatctaa	aaaatggtga	tacctgttac	acttgtgcgt	taagaccac	8160
atatacttat	ggggaaggag	gccattcct	ttctgccagt	ataaatgagg	ccctgaacaa	8220
caatgggatc	ctgtcaagt	ttggaaagtt	ctctacagtc	aacccagtct	atgttggcaa	8280
cgtggcctgg	gccacattc	tggccttgag	ggctctgcgg	gacccaaga	aggcccaag	8340
tgtccgaggt	caattctatt	acatctcaga	tgacaagcct	caccaaagct	atgataacct	8400
taattacatc	ctgagcaaa	agtttggcct	ccgccttgat	tccagatgga	gccttccttt	8460
aacctgatg	tactggattg	gcttcctgct	ggaagtagtg	agcttcctac	tcagcccaat	8520
ttactcctat	caaccccct	tcaaccgcca	cacagtcaca	ttatcaaata	gtgtgttcac	8580
cttctcttac	aagaaggctc	agcgagatct	ggcgataaag	ccactctaca	gctgggagga	8640
agccaagcag	aaaaccgtgg	agtgggttgg	ttcccttgtg	gaccggcaca	aggagacct	8700
gaagtccaag	actcagtgat	ttaaggatga	cagagatgtg	catgtgggta	ttgttaggaa	8760
atgtcatcaa	actccaccca	cctggcttca	tacagaaggc	aacaggggca	caagcccagg	8820
tctgtctgcc	tctctttcac	acaatgcccc	acttactgtc	ttcttcatgt	catcaaaatc	8880
tgcacagtca	ctggcccaac	cagaactttc	tgtcctaata	atacaccaga	agacaaacaa	8940
tatgatttgc	tgttaccaaa	tctcagtggc	tgattctgaa	caattgtggg	ctctcttaac	9000
ttgaggttct	cttttgacta	atagagctcc	atttcccctc	ttaaatagaga	aagcatttct	9060
tttctcttta	atctcctatt	ccttcacaca	gttcaacata	aagagcaata	aatgttttaa	9120
tgcttaa						9127

<210> 143
 <211> 409
 <212> DNA
 <213> Homo sapiens

<220>

<223> mitochondrial acetoacetyl-CoA thiolase (MAT)
 precursor; acetyl-CoA acetyltransferase 1 (ACAT1)
 precursor; T2

<400> 143

atthttgggtta	gtcataaatt	ctgtacttca	ttaaagaagt	aatgctttc	ttaatttttag	60
gatgtctgga	gccaggattg	ttggtcattt	gactcatgcc	ttgaagcaag	gagaatacgg	120
tcttgccagt	ttttgcaatg	gaggaggagg	tgcttctgcc	atgctaattc	agaagctgta	180
gacaacctct	gctatttaag	gagacaaccc	tatgtgacca	gaaggcctgc	tgtaatcagt	240
gtgactactg	tggttcagct	tatattcaga	taagctgttt	cattttttat	tattttctat	300
gttaactttt	aaaaatcaaa	atgatgaaat	cccaaaacat	tttgaaatta	aaaataaatt	360
tcttcttctg	cttttttctt	ggtaaccttg	aaaagtttga	tacattttt		409

<210> 144
 <211> 6372
 <212> DNA
 <213> Homo sapiens

<220>

<223> acyl-CoA dehydrogenase, C-2 to C3 short chain
 (ACADS) precursor; short-chain specific acyl-CoA
 dehydrogenase (SCAD) precursor

<400> 144

ctgcagtgtt	cgctttttgct	agaaagagga	tgtggaggaa	ggaggaggtg	ggcaatctgg	60
cttgagttgt	gctgtatcct	cttccttggt	agcttgccct	agtctcactg	gagaccattt	120
gcgatagtg	cttgggtccat	gccagcagg	acagggtctt	gctgcttctg	aaagtctggg	180
gttctgtatc	tggggctgtg	ggttcctgtg	tctagctgct	caggaaatct	tgagaagcat	240
tccactctgg	ggtgtaaacc	agtatgagtt	tgaaattcaa	gcgtttgtac	ctgagttggg	300
gagagaattg	caaggcatac	tttctctgaa	agtaacagaa	ccattcaggc	tgccatgtta	360
ttaaggaatc	tgaactgttg	atagcagtta	ccttgtgggt	gatacaatgg	gaggcgga	420
aaaaactacc	tgcataaggag	accctgccct	ttgtcaagag	ctgggagcac	atttcatcag	480

agtagcaggc	ccacctggtg	ccagagggcc	tgccccctcct	gcttctgttc	ctttgccttg	540
cagtctcctg	gagagagcct	ctcttttctc	gtacagcctt	tgggccaaaa	tgcccttcta	600
gcttctccaa	agaagatccg	agtttatctc	attctatgtt	ttaagaggta	aaaggacata	660
acaagtgaag	gaagtttttg	gctaaagtag	gctatgtctc	cttatgtatt	actcaatact	720
gttttgcaga	gaaaacattt	ttcaagcatg	tgcttctcga	agacacctca	gtctttgggc	780
catttgattt	ccaatacata	gggtggaaga	atgtgatttt	ggggctgacc	ataaactgga	840
aatttgtgaa	atggcagtg	ttgggcaatc	ttcagtttat	tttttcagtt	gaagtggaa	900
tcatttctgg	aatggattta	ataggctgtg	tctaattgtac	aaactgggtg	agtcctgcct	960
tagtgtgtcc	tgccccaccg	gtacgcttcc	aggatactct	tttccctctc	gtaaagtcac	1020
tttcttctga	tgccacagtg	cactatgatg	tcagtgaagt	ctggggatga	ggacagtggt	1080
tcctgaaatt	cacaggactg	acgcctcacc	ccagtgcacg	aggattcctg	tggcatcagg	1140
tgctgctgta	cctggtgtag	gagcctaata	attgaaccat	tgtgttactc	acattccatg	1200
tcacagaaca	tatcagcctc	aagaaggatt	tggtggaggt	ggatttacca	ctggttttac	1260
aaaggaccgt	gtaaagtcac	tgaagttgtg	aaagtctatt	tttttctcct	taaatctatt	1320
ttttacagaa	tataagaaac	atcaatgacc	tgatctgtcc	ttcctcctcc	ttcccgtctc	1380
cccaaaaatc	acattccagt	ttttattgtc	tttgtgtcca	aagtaaaacta	ggtgacttat	1440
ttgtataaaa	tgttattttg	ccacatgaga	cagtaataaa	agaaagattt	tcacagtacg	1500
tctccctcgt	cctgtctcct	gattgttggg	cccgttgtgt	tgctgagggg	agcaggggag	1560
aatgggggct	ccagggtttct	cttacttttg	ctattatgtg	gcccttctgt	aagtagttga	1620
actagagtat	agctggcttc	tagagtgtat	gaggaattgt	actggacttt	aggcttaata	1680
tttttgcttt	atattttccc	agggtgagtg	gctttgtaaa	ttgaaagttt	acatgcatgt	1740
tttaaaagta	gggttttttt	ttttgagatg	gagtttctgt	cttttttccc	aggctgggat	1800
gtgatggcat	gatggtggct	cactgcaccc	ttcgctctcc	gggttcaagt	gattgtcctg	1860
cctcagcctc	ccaagtatgt	gggattacaa	gtgcattgca	ccacgcccgg	ctaattctgt	1920
atttttggta	gagacagggg	ttcccccatt	tgccagggct	ggtcttgaac	tcctgacctc	1980
aggtgatcaa	ccgcctttgg	cctcccaaag	ttctgggatt	acaggtgtga	gccactgtgg	2040
ctggccataa	aggtaggctt	attaagaaat	actttaacta	cagtaaaatt	tacctcaatt	2100
aagagtattg	atgcattttg	acaaatgaat	acttttatta	cccatcacia	tcattgatata	2160
ggacatttcc	atcgtaccca	ctcagaaagt	tcctgagttc	cttgtgtttg	cagccagggt	2220
acttccccca	cttcgcctct	tgcaaccact	atctgattct	gtctctattg	gaaaacttgg	2280
atacttttaa	aatgaaattt	gaacgttcat	atttacagtc	acaaattctc	aagagtctgg	2340
tttagatgct	ctgtggcacc	tgaagcaatt	attggccttt	gtcaciaaac	acaactcact	2400
tatttctccc	ttttctcctg	cttcttcatt	gttttctcca	cccagggtcg	gttcccaggt	2460
gggatgactg	aaaggtgagg	aagcccttag	agcatttgcc	aatgggagcc	attcatttga	2520
ctttaaagta	ctgagaattt	agaggcggtc	ttttaaatgc	attattttaa	aagaaaggta	2580
acacattaag	gactttgctg	catcttttga	ttggctttct	tctaggaagt	agtgaccgag	2640
gtttccactt	tcctccaaga	ggaagagaca	gaagttttgg	caaataaggtc	aatgctggga	2700
acagatgcct	gcctggctga	gtgctgggaa	agaaaggcag	ttggagggat	gtgtgggtgc	2760
ctgggagggc	gtgggtgggt	cccaggaggc	tatgggaatc	agaatcacac	ttgcacaaga	2820
gaagaccctt	atgggacaag	taaaatcagc	atagtttctt	gggcggggca	aaggtgtcct	2880
gatgaggatg	ctagggttca	aatatgtggc	tgggttctgc	cccaatcggg	aatgagacac	2940
agtactgaag	tggaacgggg	gtagcatctc	caccacctct	cacagcctct	ggggaaaaga	3000
aagctttcct	tgagcccaa	ctccaggggc	ctaaatattg	agcgccaaca	caagacaggt	3060
ccttgagctt	ctcggagcga	gtcggggaag	cagataattt	cagatgcaaa	gtgccttgaa	3120
taaacagaac	gaaagataga	gagccagagg	gggagaaacg	gcttgggtgtg	gtcagggcag	3180
gcatccatga	gacctaaccg	aagagggggc	attccagaca	aaaggaacag	tgatcacaga	3240
ggccccgagt	caggaaccag	ctaagggtct	tagagaagag	ctgcctcgta	aagctaagca	3300
acaataacca	gggaatgggt	ggcatggggc	ctgatagaca	aggcaggtct	tggcttttta	3360
agccatagaa	ttggatttta	ggagggatgg	gcccggcgac	aaagccaaca	aagtttttaac	3420
ccgaagatcg	ctatcttatt	tatgctttaa	aaagacctct	ctggcctttc	tgcaagctc	3480
tatccttagc	tttctcttgt	tagcattttg	attaacgaat	tggggcacga	acagccagct	3540
gaccgaccgc	gcgcgcagtc	gagcgtcggg	tcacgcctt	gggagggacc	actggaggcc	3600
ccgcccctg	gccgcgagcg	cacctcggcc	ccgctcccga	ggccctacgg	gcgtggcctc	3660
tgctccgggt	cccgcctccc	agcactccgg	aacagcgcgc	tcgcagcggg	aggtcgcgaa	3720
gcctgggact	gtgtctgtcg	cccatggcgg	ccgcgctgct	cgcccgggcc	tcgggcccctg	3780
ccgcagagg	tgagtgcgct	gggatccgt	acggcggggc	ttcagcccgc	gtctggccca	3840
gcgggcggag	gtcctggcgg	ccggctctgt	cagagccgct	ggcaggcgga	gccccactcc	3900
gggagcgctc	acggcctttg	ccccagttct	gctgctcctt	gcgccgaccc	agcccggccc	3960
ttcaggcgct	cctggttcc	gcacagaccc	ctaccccccg	attgacccca	gccaccagcc	4020
cagttccag	ttcccatatc	tccctccctt	catttccacc	ccactagagg	ttcagggtgc	4080
gtccttcttc	cggagccagg	cctgggattg	aaccagaccc	gcattctgtga	ccttgggcaa	4140

gacagccccct	cctcagcctc	ggttggccca	tgtgtaaaaat	gtccacagag	aaaatcagag	4200
ttgttggggag	gattaaatca	tagggatatgt	aaagcacttc	gtgcctggcg	tgtaacaggt	4260
gttccacaaa	tgctcgttct	tgctgggttaa	tacagtacct	ttcccatctt	acgtgtctcc	4320
agttgtagca	gccgtgacac	atatagccac	ggcttccttt	gcctggcctg	aattacaagg	4380
ggaacgctac	tgagaactgt	gttaagcgct	agttagtctt	tctttcgcac	tccgaggagc	4440
ggaatactat	tcgcctccac	ttgttataga	aacggagggt	cactgacgtt	taaaaccctt	4500
gcctaaggtc	acagagctga	ggtcttatta	ctgttggtat	tatactgagg	actgaaggat	4560
gtagtgtagt	gaaatgtcta	gtgagtgtac	taagcattca	gttagtatgg	ggttttcagt	4620
ggccgccatg	gacatttttg	gctgacagtt	ctttgttgtg	ggggctgtcc	tctgccttgt	4680
tggatgttca	gcagggatcc	cggaccccta	tccactgggt	accaatagta	ttcccctgct	4740
ctagttgtga	caactagaac	tggctccaga	cattgccaga	tgtcccttgg	agggcaaaat	4800
cctccctggg	gagttagtgg	gtcactagga	ttcttggaga	cctcctgcct	cctccttcca	4860
ctcactttctg	cccttgccgg	cagctctctg	tccatggggc	tggcggcagt	tacacaccat	4920
ctaccagtct	gtggaactgc	ccgagacaca	ccagatgttg	ctccagacat	gccgggactt	4980
tgccgagaag	gagttgtttc	ccattgcagc	ccagggtggat	aaggaaacatc	tcttcccagc	5040
ggctcagggtg	agagtgaac	ctcagcagcc	cacgatagtg	gtctgccctc	tgctactgga	5100
tgaatgggtg	cagtgcagct	cagcggcact	cggacttttg	tagaggaacc	ccaaagcagg	5160
gcctggaacc	cagaaaatgc	tctggaagtt	tcccttgtcc	agcctgtggc	cagtagccag	5220
gacttaactt	ctggggacaac	agtaatatgt	ggtggatggt	cagttgctta	ctgtgccagc	5280
cactgtgctc	attctaaata	gtgccttttag	ggtgttttggc	atgcactagg	cactgttctt	5340
gagatgggtt	atctcatctg	ttcctcacia	cggctcctgtg	aggtgaaggt	actattctta	5400
tttatttttt	tgagacggag	tttactctt	gtggctcagg	ctggagtga	atgggtgcgac	5460
ctgcctcac	tgacgcctct	gcctcctgag	ttcaagtgat	tctcctgcct	cagcctccca	5520
agtagctggg	attataggcg	tgactgctc	tgcccgccta	cttttgtatt	tttagtaaaag	5580
acggcggttt	accatgttgg	ccaggctggt	ctcaaaactcc	tgaattcagg	tgatctgccc	5640
acctcggcct	cccaaagtgc	tgggattaca	ggtgtgagac	accacgcccc	gccaaaggta	5700
gtattattat	ataccccatg	gactcagact	tgtgaacaag	ttaaataaca	tacccaaggt	5760
catggagctc	atcagcggca	gcctgctcga	cctattttct	tttttattta	cttatttttt	5820
tttgaaatgg	actctcgctc	tgttgcccag	gctggaggggc	agtggcgcaa	tctcaacgca	5880
ctgcacccct	ctgcctcctg	ggttcaagca	attctcctgc	ctcgcccccc	agtagctggg	5940
attacaggcg	ggcaccacca	cgcccagcta	gtttttgtac	tttcagtaga	gatgggggtt	6000
ctccatgttg	ggcaggctgg	tctcaaaactc	ctgaccttag	gcgatctgcc	cgccttggcg	6060
tcccaaagtg	ctgggattac	aggcgtgagc	caccgtgccc	ggcctgcttg	aactgttttc	6120
tcccctgagt	ttcccatcag	cgcgctccct	cccgtgccac	tgtgttcttc	catttgcatt	6180
cagtctgtct	gcagctacgc	ggtgaagatg	ttactgccgt	acacgctgac	ctaaagatgt	6240
ccagcacctg	gtgtaaacac	tcagtagtag	atagttgttt	aattaatgat	ttgtgaaaag	6300
tcaaacctct	cgggcctctt	ctccttgcct	gttttttttt	ttaattttaa	ttttaattta	6360
ttttttattt	tt					6372

<210> 145
 <211> 1344
 <212> DNA
 <213> Homo sapiens

<220>
 <223> hydroxysteroid (17-beta) dehydrogenase 2 (HSD17B2); 17 beta
 hydroxysteroid dehydrogenase type 2 (17b-HSD); 17beta-estradiol
 dehydrogenase; estradiol 17beta dehydrogenase type 2;
 20alpha-hydroxysteroid dehydrogenase

cagaactcag	gctgcctcca	gccagccttt	gcccgcctaga	ctcactggcc	ctgagcactt	60
gaagggtcag	caagtcactg	agaatgagca	ctttcttctc	ggacacagca	tggatctgcc	120
tggctgtccc	cacagtacta	tgtgggacag	tatttttcaa	atacaagaag	agctcagggc	180
agctgtggag	ctggatggtc	tgccctggcag	gcctctgtgc	agtctgcctg	ctcatcctgt	240
cccctttttg	gggcttgatc	ctcttctcgg	tgtcatgctt	cctcatgtat	acttacttat	300
ctggccaaga	attgttacct	gtggatcaga	aggcagtcct	ggtgacaggt	ggtgattgcg	360
ggcttgggca	tgcttttgtc	aagtatctgg	atgagctggg	cttcacggta	tttgccggag	420
ttttgaatga	aaatggccca	ggagctgagg	aattgcgaag	aacctgctct	ccgcgcctct	480
cgggtgctcca	aatggacatc	acgaagccag	tgcagataaa	agatgcttac	agcaagggtg	540
cagcaatgct	gcaggacaga	ggactgtggg	ctgtgatcaa	caatgctggg	gtgcttggct	600

ttccaactga	tggggagctt	cttcttatga	ctgactacaa	acaatgcatg	gccgtgaact	660
tctttggaac	tgtggaggtc	acaaagacgt	ttttgcctct	tcttagaaaa	tccaaagggg	720
ggctggtgaa	tgtcagcagc	atgggaggag	gggcccgaat	ggaaaggctg	gcattcttatg	780
gctcatcaaa	ggcggctgtg	accatgttct	catcagttat	gagactggag	ctttccaagt	840
ggggaattaa	agttgcttcc	atccaacctg	gaggcttcc	aacaaatata	gcaggcacca	900
gtgacaagtg	ggaaaagctg	gagaaggaca	ttctggacca	cctccccgct	gaggtacagg	960
aagactacgg	ccaggactac	atcttagcac	agcggaat	cctcctattg	atcaactcgt	1020
tagccagcaa	ggacttctct	ccggtgctgc	gggacatcca	gcattgctatc	ttggcgaaga	1080
gcccttttgc	ctattacacg	ccagggaag	gcgcttactt	gtggatctgc	cttgctcaact	1140
atttgcctat	tggcatatat	gattactttg	ctaaaagaca	ttttggccaa	gacaagccca	1200
tgcccagagc	tctaagaatg	cctaactaca	agaaaaaggc	cacctaggca	atggaagccc	1260
tcaaagaagt	cggaatgtca	tagtcttgaa	atgaaaggga	aactgggaaa	ctgggtttct	1320
cattaaagtt	gtttcccact	ctga				1344

<210> 146
 <211> 1897
 <212> DNA
 <213> Homo sapiens

<220>
 <223> 11-beta-hydroxysteroid dehydrogenase type II
 (HSD11B2, 11-beta-HSD2, 11-DH2); corticosteroid
 11-beta-dehydrogenase, isozyme 2; NAD-dependent
 11-beta-hydroxysteroid dehydrogenase

<400> 146						
gacgagagaa	agcgagtgtc	cctctcgcgc	cccaggccgg	tgtacccccg	cactccgcgc	60
cccggcctag	aagctctctc	tccccgctcc	ccggcccggc	ccccgccccg	ccccgcccc	120
gcccgcctggc	gccatggagc	gctggccttg	gccgtcgggc	ggcgccctggc	tgctcgtggc	180
tgcccgcgcg	ctgctgcagc	tgtctgcgtc	agacctgcgt	ctgggcccgc	cgctgctggc	240
ggcgctggcg	ctgctggccg	cgctcgactg	gctgtgccag	cgctgctgc	ccccgcccgc	300
cgcaactcgcc	gtgctggccg	ccgcgggtg	gatcgcggtg	tccgcctgg	cgcgcccga	360
gcgcctggcg	gtggccactc	gcgcggtgct	catcacggc	tgtgactctg	gttttggcaa	420
ggagacggcc	aagaaactgg	actccatggg	cttcacggtg	ctggccaccg	tattggagtt	480
gaacagcccc	ggtgccatcg	agctgcgtac	ctgctgctcc	cctgcgctaa	ggctgctgca	540
gatggacctg	accaaaccag	gagacattag	ccgcgtgcta	gagttcacca	agccccacac	600
caccagcacc	ggcctgtggg	gcctcgtcaa	caacgcaggc	cacaatgaag	tagttgctga	660
tgcggagctg	tctccagtgg	ccactttccg	tagctgcatg	gaggtgaatt	tctttggcgc	720
gctcgagctg	accaagggcc	tcttgcctct	gctgcgcagc	tcaaggggcc	gcattcgtgac	780
tgtgggggagc	ccagcggggg	acatgccata	tccgtgcttg	ggggcctatg	gaacctccaa	840
agcgcccggtg	gcgctactca	tggacacatt	cagctgtgaa	ctccttccct	gggggtgcaa	900
ggctcagcatc	atccagcctg	gctgcttcaa	gacagagtca	gtgagaaaacg	tgggtcagtg	960
ggaaaagcgc	aagcaattgc	tgttgggcaa	cctgcctcaa	gagctgctgc	aggcctacgg	1020
caaggactac	atcgagcact	tgcattggca	gttcctgcac	tcgctacgcc	tggccatgtc	1080
cgacctcacc	ccagttgtag	atgccatcac	agatgcgctg	ctggcagctc	ggccccgcgc	1140
ccgctattac	cccggccagg	gcctggggct	catgtacttc	atccactact	acctgcctga	1200
aggcctgcgg	cgccgcttcc	tgcaggcctt	cttcactcgt	cactgtctgc	ctcgagcact	1260
gcagcctggc	cagcctggca	ctacccccacc	acaggacgca	gcccaggacc	caaacctgag	1320
ccccggccct	tcccagcag	tggctcgggtg	agccattgtc	acctatggcc	cagccactgc	1380
agcacaggag	gctccgtgag	cccttggttc	ctccccgaaa	acccccagca	ttacgatccc	1440
caaagtgtcc	tggaccctgg	cctaaagaat	cccaccccc	cttcattgcc	actgccgatg	1500
cccaatccag	gcccgggtgag	gccaagggtt	cccagtgcgc	ctctgcgcct	ctccactgtt	1560
tcatgagccc	aaacaccctc	ctggcacaa	gctctaccct	gcagcttggg	gaactccgct	1620
ggatggggag	tctcatgcaa	gacttcaactg	cagcctttca	caggactctg	cagatagtg	1680
ctctgcaaac	taaggagtga	ctaggtgggt	tggggacccc	ctcaggattg	tttctcggca	1740
ccagtgcctc	agtgtgcaa	ttgagggtga	aatcccaagt	gtctcttgac	tggctcaaga	1800
attagggccc	caactacaca	cccccaagcc	acagggaagc	atgtactgta	cttcccaatt	1860
gccacatttt	aaataaagac	aaatttttat	ttcttct			1897

<210> 147
 <211> 511
 <212> DNA
 <213> Homo sapiens

<220>
 <223> MAT8 protein; FXYD domain containing ion transport
 regulator 3 (FXYD3) precursor; chloride
 conductance inducer Mat-8; phospholemmann-like
 protein

<220>
 <221> modified_base
 <222> (511)
 <223> n = g, a, c or t

<400> 147
 cccgatttct cccggaacct ctgctcagcc tgggtgaacca cacaggccag cgctctgaca 60
 tgcagaaggt gaccctgggc ctgcttgtgt tcctggcagg ctttctctgtc ctggacgcca 120
 atgacctaga agataaaaaac agtcctttct actatgactg gcacagcctc cagggttggcg 180
 ggctcatctg cgctgggggt ctgtgcgcca tgggcatcat catcgatcat agtgcaaaat 240
 gcaaatgcaa gtttggccag aagtccggtc accatccagg ggagactcca cctctcatca 300
 ccccaggctc agcccaaagc tgatgaggac agaccagctg aaattgggtg gaggaccgtt 360
 ctctgtcccc aggtcctgtc tctgcacaga aacttgaact ccaggatgga attcttcctc 420
 ctctgtctggg actcctttgc atggcagggc ctcatctcac ctctcgcaag aggttctctt 480
 tgttcaattt tttttaatct aaaatgatta n 511

<210> 148
 <211> 571
 <212> DNA
 <213> Homo sapiens

<220>
 <223> guanylate cyclase activator 2A (GUCA2A); guanylate
 cyclase activating protein 1 (Gap-I); guanylin 2,
 intestinal, heat-stable; guanylin precursor;
 proguanylin

<400> 148
 tcgctgccat gaatgccttc ctgctcttcg cactgtgcct ccttgggggc tgggcccgcct 60
 tggcaggagg ggtcaccgtg caggatggaa atttctcctt ttctctggag tcagtgaaga 120
 agctcaaaga cctccaggag ccccaggagc ccagggttgg gaaactcagg aactttgcac 180
 ccattccctgg tgaacctgtg gttcccatcc tctgtagcaa cccgaacttt ccagaagaac 240
 tcaagcctct ctgcaaggag cccaatgcc aggagatact tcagaggctg gaggaaatcg 300
 ctgaggaccc gggcacatgt gaaatctgtg cctacgctgc ctgtaccgga tgctaggggg 360
 gcttgcccac tgctgcctc ccctccgcag cagggaagct cttttctcct gcagaaaggg 420
 ccacccatga tactccactc ccagcagctc aacctaccct ggtccagtcg ggaggagcag 480
 cccggggagg aactgggtga ctggaggcct cgcccccaaca ctgtccttcc ctgccacttc 540
 aacccccagc taataaacca gattccagag t 571

<210> 149
 <211> 755
 <212> DNA
 <213> Homo sapiens

<220>
 <223> 6-pyruvoyl-tetrahydropterin synthase (PTPS, PTS);
 PTP synthase

<400> 149
 gtgggaggag gcaccggccg cgcggcggga ggaggtgccg gccgagcacc gcagacagcg 60

cggggaagat	gagcacggaa	ggtggtggcc	gtcgctgcc	ggcacaagt	tcccgccgca	120
tctccttcag	cgcgagccac	cgattgtaca	gtaaatttct	aagtgatgaa	gaaaacttga	180
aactgttttg	gaaatgcaac	aatccaaatg	gccatgggca	caattataaa	gttgtggtga	240
cagtacatgg	agagattgac	cctgctacgg	gaatggttat	gaatctggct	gatctcaaaa	300
aatatatgga	ggaggcgatt	atgcagcccc	ttgatcataa	gaatctggat	atggatgtgc	360
catactttgc	agatgtggtg	agcacgactg	aaaatgtagc	tgtttatatc	tgggacaacc	420
tccagaaagt	tcttcctgta	ggagttcttt	ataaagtaaa	agtatacgaa	actgacaata	480
atattgtggt	ttataaagga	gaatagctat	tggggttagc	attgcacaaa	gcccgatttc	540
tttctgtgtt	tgaaaaagat	tttgatcccc	ttggaatatt	aagaggtcaa	cacgtgattg	600
ttgtacgtac	acattgtgct	ctggagtgcc	tatttattga	aatcattgta	agacctgtta	660
taaattttaag	tctattttaa	actaaacttg	taatatacat	cctgaaaatc	atthagagag	720
tcttttattt	ataaatttaa	aatcacttca	ttttc			755

<210> 150
 <211> 3727
 <212> DNA
 <213> Homo sapiens

<220>
 <223> KIAA0035; similar to rat nucleolar phosphoprotein
 of 140 kD (RATNOP140B), nucleolar and coiled body
 phosphoprotein 1 (NOLC1), nucleolar phosphoprotein
 p130; trans-regulated protein 13; HCV NS5A

<400> 150						
cggccgccc	cattcgccc	gtggttccc	gcgacctgta	tcccctcgtg	ctcggttcc	60
tgcgcgataa	ccaactctca	gaggtggcca	ataagttcgc	caaagcgaca	ggagctacac	120
agcaggatgc	caatgcctct	tccctcttag	acatctatag	cttctggctc	aagtctgcc	180
aggtcccaga	gcgaaagtta	caggcaaatg	gaccagtggc	taagaaagct	aagaagaagg	240
cctcatccag	tgacagttag	gacagcagcg	aggaggagga	ggaagttcaa	gggcctccag	300
caaagaaggc	tgctgtacct	gccaagcgag	tcggtctgcc	tcctgggaag	gctgcagcca	360
aagcatcaga	gagttagcag	agtgaaagag	ccagtgtgta	tgatgatgag	gaggacaaa	420
agaaacagcc	tgtccagaag	ggagttaagc	cccaagccaa	ggcagccaaa	gctcctccta	480
agaaggccaa	gagctctgat	tctgattctg	actcaagctc	cgaggatgag	ccaccaaaaga	540
accagaagcc	aaagataaca	cctgtgacag	ttaaagctca	gactaaagcc	cctcccaaac	600
cagctcgagc	agcacctaaa	atagccaatg	gtaaagcagc	cagtagcagc	agtagcagca	660
gcagcagcag	tagcagtgat	gactcagagg	aggagaaggc	agcagccacc	cccaagaagg	720
tctggaccat	aacttctgtc	agggcagaga	ctgtacctaa	aaagcaagtt	gtggccaagg	780
ccccagtga	agcagctacc	acccctaccc	ggaagagttc	tagcagttag	gattcctcca	840
gtgacgagaa	agaggagcaa	aaaaaaccca	tgaaaaataa	accaggtccc	tacagttcag	900
tccccccgcc	ttctgtctcc	ccaccaaaaga	agtcctctgg	aaccagcct	cccaagaagg	960
ctgtggagaa	gcagcagcct	gtggaaagca	gtgaagacag	cagtgtgag	tctgattcaa	1020
gttctgaaga	agagaagaaa	cccccaacta	aggcagtagt	ctctaaagca	accactaaac	1080
cacctccagc	aaagaaagca	gcagagagct	cttcagacag	ctcagactct	gacagctctg	1140
aggatgatga	agctccttct	aagccagctg	gtaccaccaa	gaattcttca	aataagccag	1200
ctgtcaccac	caagtcacct	gcagtgaagc	cagctgcagc	ccccaaagca	cctgtgggag	1260
gtggccagaa	gcttctgacg	agaaaggctg	acagcagctc	cagttaggaa	gagagcagct	1320
ccagttagga	ggagaagaca	aagaagatgg	tggccaccac	taagcccaag	gcgactgcca	1380
aagcagctct	acctctgcct	gccaagcagg	ctcctcaggg	tagtagggac	agcagctctg	1440
attcagacag	ctccagcagt	gaggaggagg	aagagaagac	atctaagtct	gcagttaaga	1500
agaagccaca	gaaggtagca	ggaggtgcag	ccccttccaa	gccagcctct	gcaaagaaag	1560
gaaaggctga	gagcagcaac	agttcttctt	ctgatgactc	cagttaggaa	gaggaagaga	1620
agctcaaggg	caagggtctt	ccaagaccac	aagcccccaa	ggccaatggc	acctctgcac	1680
tgactgccc	gaatggaaaa	gcagctaaga	acagttagga	ggaggaagaa	gaaaagaaaa	1740
aggcggcagt	ggtagtttcc	aatcaggtt	cattaaagaa	gcggaagcag	aatgaggctg	1800
ccaaggaggc	agagactcct	caggccaaga	agataaagct	tcagaccctt	aacacatttc	1860
caaaaaggaa	gaaaggagaa	aaaagggcct	catccccatt	ccgaagggtc	agggaggagg	1920
aaattgaggt	ggattcacga	gttgcgaca	actcctttga	tgccaagcga	ggtgcagccg	1980
gagactgggg	agagcgagcc	aatcaggttt	tgaagttcac	caaaggcaag	tcctttcggc	2040
atgagaaaa	caagaagaag	cggggcagct	accggggagg	ctcaatctct	gtccagggtc	2100
attctattaa	gtttgacagc	gagtgacctg	aggccatctt	cggtgaagca	agggtagatga	2160

tccgagacta	cttactttct	ccagtggacc	tgggaaccct	caggtctcta	ggtgagggtc	2220
ttgatgagga	cagaagttta	gagtaggtcc	taagacttta	cagtgtaca	tcctctctgg	2280
tccttttctg	tgttcctagt	tttgtacaga	cttgtttttg	agtgttgagt	agcagggaca	2340
aaataaggga	atggtatttt	ttaagaaaaa	tcattttcat	tggtgtctcc	ttccttttct	2400
gtgaaagtcc	tcatactgag	aaattttgat	attttatatt	aaatcactta	ctattgattt	2460
ttgtttgat	tttcaaagg	ggattccac	agataaaatc	ttggctattg	cccaaaacat	2520
agtaaagggt	cacgtgtgac	tttttataat	aggaagaaaa	ttctgccttt	gtgagtgcac	2580
atgtccacat	ttcatccctc	cttccctcaa	aaccctagag	aggggcatta	aagaattggt	2640
gatgtatatg	caatgtctgt	taagcatgca	ctatgtattt	catcctcatt	tattgggtct	2700
gggactgaag	tttttagcca	gcatggacct	aacctacttt	ttgggataaa	attctctggt	2760
ttgttacagg	caaaattctg	gtatggcgtg	aatgccatgg	gtcattctga	atatattttt	2820
ttctgtaatt	ttatcattac	acgatgtttg	caatacgtgc	tttgtttttt	aatttgaaag	2880
caaacttttc	tactgttgaa	agacattttt	tgacaacttg	acccttccta	gtattgagtt	2940
ctaagttgag	gactgcatct	tctcgttttt	tacagtatag	agaacaaaat	gacattagtt	3000
tgaaaaatac	atatcacttg	gtattgctgt	cttggttgca	gtggtgatac	agaattggtt	3060
tcattaattc	ctacatgggt	gagaatcact	gatcaagaaa	gtgggggggaa	aaaaaacaaa	3120
cgttaaaacc	tcaatcctca	gtaggaaggt	agattacatt	aggtgaaatt	ataggtaatc	3180
tatgtatgtg	ctaattgggt	tggaaagaac	cttacagagc	atattacctg	ataaactgga	3240
gtgggttttg	gagaacaaac	taataggatt	attgtgtctc	ctagttggta	cctgggagca	3300
attgacatgc	cccttcaga	accttaactg	ttagtagcag	tggctgtaac	aacacaaacc	3360
agtgaccaga	gataacagct	tttaggcaa	gctggcctga	cggatgggt	gcaggaagtg	3420
actgagcagt	agcggctact	agccagacca	agacggagag	ggaagagtc	acagctttct	3480
ggaagctaag	gcattctggg	ggtagaaaa	tgtgccccaa	gccttcattg	acgagttata	3540
ggtcttaaga	ttagtctcct	cttgtttgga	ttccatactt	gctaaataac	ctgataataa	3600
cctggttttc	catgtaactg	cctctaggaa	gaaaatgtac	tgttcatgct	gacacagata	3660
tttcagtctg	catggtaaaa	gttctaaatc	ttactacaaa	ataataaact	ggctggttta	3720
taatgtg						3727

<210> 151

<211> 5654

<212> DNA

<213> Homo sapiens

<220>

<223> KIAA0367; BNIP2 motif containing molecule at
carboxyl terminal region (BMCC1)

<400> 151

gctttgtttg	atgggtgatcc	acattttatcc	acagagaatc	ctgccttggg	tcctgatgct	60
ttgctagcct	cagacacttg	tctggatata	agcgaagctg	cctttgacca	cagtttcagc	120
gatgcctcag	gtctcaacac	atccacggga	acaatagatg	acatgagtaa	actgacatta	180
tccgaaggcc	atccggaaac	gccagttgat	ggggacctag	ggaagcaaga	tatctgctca	240
tctgaagcct	cgtgggggtga	ttttgaatat	gatgtaattg	gccagaatat	cgatgaagat	300
ttactgagag	agcctgaaca	cttctctgat	ggtggtgacc	ctcctttgga	ggaagattct	360
ctgaagcagt	cgctggcacc	gtacacacct	ccctttgatt	tgtcttatct	cacagaacct	420
gcccagagtg	ctgaaacaat	agaggaagct	gggtctccag	aggatgaatc	tctgggatgc	480
agagcagcag	agatagtgtc	ttctgcactt	cctgatcgaa	gaagtgaggg	aaaccaggct	540
gagacaaaa	acagactgcc	tggatcccag	ctggctgtgc	tgcatattcg	tgaagacct	600
gagtcgcgtt	atctgcccgt	aggagcaggc	tccaacattt	tgtctccatc	aaacgttgac	660
tgggaagtag	aaacagataa	ttctgattta	ccagcagggt	gagacatag	accacaaaat	720
ggtgccagca	aggaaatacc	agaattggaa	gaagaaaaaa	caattcctac	caaagagcct	780
gagcagataa	aatcagaata	caaggaagaa	agatgcacag	agaagaatga	agatcgatcat	840
gcactacaca	tggattacat	acttgtaaac	cgtgaagaaa	attcacactc	aaagccagag	900
acctgtgaag	aaagagaaa	catagctgaa	ttagaattgt	atgtagggtc	caaagaaaac	960
gggctgcagg	gaactcagtt	agcaagcttc	ccagacacat	gtcagccagc	ctccttaaat	1020
gaaagaaaag	gtctctctgc	agagaaaatg	tcttctaaag	gcgatacgag	atcatctttt	1080
gaaagccctg	cacaagacca	gagttggatg	ttcttggggc	atagtgaggt	tggtgatcca	1140
tcaactggatg	ccagggactc	agggcctggg	tggtctggca	agactgtgga	gccgttctct	1200
gaactcggct	tgggtgagg	tcccagctg	cgattctctg	aagaaatgaa	gcctctagaa	1260
tcttttagcac	tagaggaagc	ctctggtcca	gtcagccaat	cacagaagag	taagagccga	1320
ggcagggctg	gcccggatgc	agttacccat	gacagtgaat	gggaaatgct	ttcaccacag	1380

cctgttcaga	aaaacatgat	ctctgacacg	gaaatggagg	aggagacaga	gttccttgag	1440
ctcggaacca	ggatatcaag	accaaattgga	ctactgtcag	aggatgtagg	aatggacatc	1500
ccctttgaag	agggcgtgct	gagtcgccagt	gctgcagaca	tgaggcctga	acctccta	1560
tctctggatc	ttaatgacac	tcatcctcgg	agaatcaagc	tcacagcccc	aaatatcaat	1620
ctttctctgg	accaaagtga	aggatctatt	ctctctgatg	ataacttgga	cagtccagat	1680
gaaattgaca	tcaatgtgga	tgaacttgat	acccccgatg	aagcagattc	ttttgagtac	1740
actggccatg	atcccacagc	caacaaagat	tctggccaag	agtcagagtc	tattccagaa	1800
tatacgccg	aagaggaacg	ggaggacaac	cggcttttga	ggacagtggg	cattggagaa	1860
caagagcagc	gcattgacat	gaagggtcatc	gagccctaca	ggagagtcac	ttctcacgga	1920
ggatactatg	gggacggtct	aaatgccatc	attgtgtttg	ccgcctgttt	tctgccagac	1980
agcagtcggg	cggattacca	ctatgtcatg	gaaaaatcttt	tcctatatgt	aataagtact	2040
ttagagttga	tggtagctga	agactatatg	attgtgtact	tgaatggtgc	aacccccaa	2100
aaggaggatg	ccagggtag	gctggatgaa	gaaatgctac	cagatgattg	acagacgggt	2160
gaggaagaat	ttgaaatcat	tcatcattgt	tcattccatct	tggttcatca	gaacaatcct	2220
tgctgtgaca	cgacctttta	taagttcaaa	attcagcagt	aaaattaaat	atgtcaatag	2280
cttatcagaa	ctcagtgggc	tgatcccaat	ggattgcac	cacattccag	agagcatcat	2340
caaactggat	gaagaactga	gggaagcatc	agaggcagct	aaaactagct	gcctttacaa	2400
tgatccagaa	atgtcttcta	tggagaagga	tattgacttg	aagctgaaag	aaaagcctta	2460
gttgcccatg	ctggaagaag	aggatgcttt	tctggttcat	ggttctgttg	aaacatatct	2520
acctgaaaga	gacagggtctg	atgttacctt	tttccacttt	gcactacctg	gtgccattct	2580
aaatttctaa	ggggaaaaat	agaaagtttg	tttactctta	agatatctta	tgaaattgtg	2640
tgtactttcc	tattttgcca	attatgtgcc	tcaaagattt	tagttgagcc	ttagcaagaa	2700
agtaggacct	tccattttcaa	tacttcatca	acacggtgta	gtgatacttt	gtcccttaga	2760
ctggtgttta	ccagtaagat	acctttaatc	cactgttaag	tatgagtgga	tttgtttcca	2820
tagattagct	ggattttcctt	ttggtgattg	cattaggttt	aaagtacaca	ggtctcaact	2880
ctcccagga	aagttttccc	tgtttgactc	cacctttaaa	atcctaagcc	tgactaggac	2940
agccacaaac	cacacaaggt	gtaaaaccat	catcagctaa	gtgcccgttt	tgttcttgtt	3000
taccagaatc	tccttttaact	tctcaaaggg	aagccgggct	ttctaatacca	cgtcaacttt	3060
attttagttg	tcaaattggg	cattatat	tatgtaaatt	ggtcttttaa	catcattttc	3120
ctgatgaatg	ttggtgacca	ccacattgtg	aaatttaaga	atccgtgttg	catgtttggg	3180
agctctctga	gtttcaggcc	ataaactcag	ctccagaggt	taccttttaa	gtgccaagaa	3240
ctcaagtgca	aggtggccta	ctcaaaaatc	atttggtagc	attcagttat	tcatgaattc	3300
ctctctcgca	tgcattataa	aaagtgatct	gctttaaaac	accgtaatct	gatcataagg	3360
ttaaaattaa	atatgagtat	tactttcatg	tacaaaatat	ttcctttata	gtcttcatat	3420
gcccttttaa	atgccacaa	gattttcaagt	ctgtaggcct	ctagttaggt	ggggtggcaa	3480
accacagcta	agtctcgctc	accactgcaa	gctaagaatg	gtttttacat	tttgggttgg	3540
aaaaattttt	tttgaatatt	tcatgacaca	tgaaaattat	tcaaattgta	gtgccgataa	3600
ataaagtggg	actgaaacac	agccacacaa	acttgttttt	gtactgtcta	cagctacttt	3660
cacactacag	ccgcagagct	gagcagttca	gcagaccgta	tgtcccacaa	tgccataaac	3720
attgactatg	tttacagaaa	aaagtttgctg	acccctgctc	tagcaaacgc	atcccttcct	3780
actccacccc	aattttgtatt	tagatagttt	ctctaacaga	acggacaaat	gagggtgcaa	3840
actaatttat	ttttgtcaaa	aatcaatggt	ttgacatcca	cagacagtga	aataaaagaa	3900
atggcttgct	gaaaaacatg	aggagtcccta	gccacaaaat	cactgcttag	gttgcaattg	3960
ccaaaatgaa	gccttcttag	aagcacttct	ttagtatata	caggtgttgg	ctgaagtccg	4020
tgccctcactc	tgggaacccat	tcttagtctc	cagtgtctcc	tattacaaag	aagctggcag	4080
aaataaaaaat	gaaggggtga	gagcggttcc	accctagtct	catggtggaa	aattcattgg	4140
ggagagctgt	ccaggatatt	tggagtcctg	ggtagaagga	gcttgtaact	actttaaagt	4200
cgacatcttt	gcacaggtga	ttgagtttct	ctgacctcat	tgcttcacct	ctgtctcctc	4260
ccgtccttcc	gcacgtgccc	acacacacgc	agttcagccc	tcttctctcc	ataagcctcc	4320
atcgttttct	cttttctcct	cttgatcctt	tcaagcgagt	atcttgttga	attgtatggt	4380
ctgttggate	tcctccttca	taacatctgg	cttggtggac	agaaaaaccc	tacagcccac	4440
cccctccac	agcccacctc	cacttttgaa	agcccaaat	acacctctcc	cagaacacag	4500
tgttgacgta	aatacagtta	cccaatattc	ctgtttgttc	acctatttgc	tactttcaact	4560
cagtagcatc	ccattttgta	aatgaattc	catggtcacc	ctgtcacagg	aagtaatgaa	4620
aaatccagtg	ttcagtgtag	tgggtgcaaac	ctgagggcat	agagctgttc	atagagggct	4680
cttgttatag	ccaaacagac	acagcaacaa	tctcaccatt	tatatatata	tttttaactt	4740
gtccagctca	tctatggaaa	actactcagg	tggtatgctg	tttgaagcct	catcttcccta	4800
catgaaaatt	atgggcattt	gtcccaatga	ttttgtttca	gctgttctgt	aggctgcata	4860
accactctga	tattttaggta	tctgctattt	tattactctta	aaagacaaat	taatttaatt	4920
gcatgtgcta	gggaaaagct	accatgtaca	ttcaccccaa	gtaaaatagaa	tcctagatga	4980
atcctagaaa	aataatccct	aagcagatag	gtagacagag	gtaaacattc	acatgattta	5040

```

gctctctagc tcttgcactc tgaacattct tgctttgggt ctgacttctg ggaactgctt 5100
tgcattttct ctatagatct gtagttaagg gaaccaaggg gtcattgggg caaaagcatt 5160
gtttctcaaa gctccttgat taagagaaag aacagaaatt tgcacagaag atagtgtcaa 5220
ggagtgaaga agtttggttg agggcagtag ctctctaaga cattctctga ggtgtgtgag 5280
gttgaagcca tacaatgttc tatggggtta ctctctaaga cattctctga ggtgtgtgag 5340
gaagtcacta ctctagcct ttgttaagat gtaattttta atattcagtt atggtactat 5400
gtttgcaact ctctgtctat cacaatgcct cagtagtttg ttcccttaga aacatttaga 5460
tgtgcacaaa ttaatctttt atatatctaa aggtttttct atcatgcatt ggattgctca 5520
gaataaaagt tctgttagac ttcgttttgg taaataaatt ctccataatg tagattaata 5580
atataaaagt ctttaatgac acaatatatc tatatagcct cactgtataa ttcagaaata 5640
aaaattgatt ctgc 5654

```

<210> 152
 <211> 1144
 <212> DNA
 <213> Homo sapiens

<220>
 <223> endogenous retrovirus envelope region; pseudo-env;
 PL1

```

<400> 152
ggaaatgact gacctgatgt gtgttataac ccatctgagc cccctacaac caccagtttt 60
gaaataagat taagaactgg ccttttccta ggtgatacaa gtgaaataat aactagaaca 120
gaagaaaaag gaatcccca acaagtaact ttaagatttg acgcttgtgc agccattaat 180
agtaacaagc taggaacagg atgtggttct cttaactggg aaaggagcta cagagtagaa 240
aataaatatg tttgtcatga gtcaggggtt tgtgaaaatt gtgccttttg gccatgtgtt 300
atttaggcta cttggaaaaa gaacaaaaag gacttggttc atcttcagaa aggggaagcc 360
aaccctcct gtgctgccag tcaactgtaac ccactagaac taataattac caatccccta 420
gatccccatt ggaaaaaggg agaatgtgta accctgggga ccaaagggac agggttaaac 480
ccccaaagtg ccatttttagt tcaaggggag gtccacaagc actctcccaa accagtgttt 540
caaacctttt atgaggagtt aaatctgcca gcaccagaac ttctgaaaaa gataaaaaat 600
ttgtttctcc aattagcaga aaatgtagct cattccctta atgttacttc ttgttatata 660
tgcgggggaa ccactatcag agaccgatgg ccttgggaag cctgagagtt ggtgccact 720
gatccagctc ctgatataat gggggcttgt ccaggatctc atcaggactg gatggctctc 780
gctggactat actggatatg tgggcagaga gcctacattc agttacctaa tgaatgggca 840
gacagttgtg ttattggcac tattaagcca tcctttttct tattaccgat aaaaactact 900
ggtactatct gtaaattcca gacattgtat gagaaagcac tgtaaaactt tttgttctgt 960
tagctgatat atgtagcctc cagtcacatt cctcatgctt acttgatcta tcatgaccct 1020
ttcagctgga ccccttagag ttgtaagccc ttaaaagggc taggaatttc tttttggggg 1080
agcttggtc ttaagacatg agtctgcaa tgctaccggc caaataaaaa cctcttcctt 1140
cttt 1144

```

<210> 153
 <211> 494
 <212> DNA
 <213> Homo sapiens

<220>
 <223> cytochrome c oxidase subunit Vb, mitochondrial
 precursor; cytochrome c oxidase subunit 5B (COX5B)

```

<400> 153
tttttttttt tttccaatgc aatggcttca aggttacttc gcggagctgg aacgctggcc 60
gcgcaggccc tgagggctcg cgccccagt ggcgcggccg cgatgcgctc catggcatct 120
ggaggtggtg ttcccaactga tgaagagcag gcgactgggt tggagaggga gatcatgctg 180
gctgcaaaga agggactgga cccatacaat gtactggccc caaagggagc ttcaggcacc 240
aggggaagacc ctaatttagt cccctccatc tccaacaaga gaatagtagg ctgcatctgt 300
gaagaggaca ataccagcgt cgtctggttt tggctgcaca aagggcaggc ccagcgatgc 360
ccccgctgtg gagcccatta caagctggtg ccccgagcagc tggcacactg agcacctgca 420

```

ctaaattact caaaatgtgc tgtaaagttt cttctttcca gtaaagacta gccattgcat 480
 tggtccttc tccc 494

<210> 154

<211> 1620

<212> DNA

<213> Homo sapiens

<220>

<223> pancreatic ribonuclease A precursor; ribonuclease,
 RNase A family, 1 (pancreatic) (RNASE1, RNS1,
 RNase A, RNase 1); ribonuclease HK-2A; ribonuclease,
 secretory; HP-RNase; RNase UPI-1; RIB1

<400> 154

```

gaattccggg tttgaaaagg agttctaggg aagaagagag ttagttagca catcaatggg 60
agcagggttc ttacccccacg tgggtgttaca tatatattat tttcatacat ggtttctggc 120
tcataagttc cttagccctt gctatagtct tttgtgttcg gtcttaaggg caggactgta 180
ctcttccttc acctttctaa ttgtgcatct taagaccttc ccagagaggg gtgggtgccct 240
gtagttgtgg gaaggaatgc tggcatcatg aagcttccat aaaaacccga gaaacgagct 300
tctggatagc tggacacatg gaggtcctgg aggggtggagc ccaggggaggc atggaagctc 360
cacagccctt ccccatatac ttaccctatt tcctctgtat cctttgtaat atcctttatg 420
ataaaccagc aaatgtgtgt aaatgtttcc ctaaggtctg tggccactcc agcaaattaa 480
ttgaacctaa agaggggggtc gtgggaaccc caacttgaag ccagtcagtc agaagttctg 540
gatgtccaga cttcagactg gtgtctgaaa ggggtggaggc agtcttgggg accgagcccc 600
caatctatgg gatctgacac tatctccagt agtggttgaa ttgagtcacc agcgtgtcca 660
ctggttagtg tgtgagaaac tccctacat tggtcacaga agtcttcttc tgtgttgata 720
gtttagtgtg gacagcagag gaaaaacaaa gtcagaaaga gttttcccgga acacacccaa 780
ttctccatt ttactatcca tttccacaaa cactgactac aatagaagta taaaaattac 840
tccactgcat cattcagctt tccatctctc tcagacacca agctgcagat ccaggctcact 900
ttgtaggtca ccacctagag gggaggaaga cctcgctttg gagagtggga ataaaacgct 960
cgtggaaaag ggtacacgct tttctgggaa agtgaggcca ccatggctct ggagaagtct 1020
cttgtccggc tccttctgct tgtcctgata ctgctgggtg tgggctgggt ccagccttcc 1080
ctgggcaagg aatcccgggc caagaaattc cagcggcagc atatggactc agacagttcc 1140
cccagcagca gctccaccta ctgtaaccaa atgatgaggc gccggaatat gacacagggg 1200
cggtgcaaac cagtgaacac ctttgtgcac gagcccctgg tagatgtcca gaatgtctgt 1260
ttccaggaaa aggtcacctg caagaacggg cagggcaact gctacaagag caactccagc 1320
atgcacatca cagactgccg cctgacaaac ggctccaggt accccaactg tgcataccgg 1380
accagcccga aggagagaca catcattgtg gcctgtgaag ggagcccata tgtgccagtc 1440
cactttgatg cttctgtgga ggactctacc taaggtcaga gcagcgagat accccacctc 1500
cctcaacctc atcctctcca cagctgcctc ttccctcttc cttccctgct gtgaaagaag 1560
taactacagt tagggctcct attcaacaca cacatgcttc ctttctctga gccggaattc 1620

```

<210> 155

<211> 2000

<212> DNA

<213> Homo sapiens

<220>

<223> K12 protein precursor; secreted and transmembrane
 protein 1 (SECTM1) precursor

<400> 155

```

atthtctctgg ggctccgggg cgcgagagaag ctgcatccca gaggagcgcg tccaggagcg 60
gacccgggag tgtttcaaga gccagtgaac aggaccaggg gcccaagtcc caccagccat 120
gcagacctgc cccctggcat tccttgcca cgthtccag gcccttgga ccctctgtt 180
tttggtgctc tccttgagtg ctgagaatga aggtggggac agccccatct gcacagaggg 240
ggtagtctct tgtcttggg gcgagaacac cgtcatgtcc tgcaacatct ccaacgcctt 300
ctcccatgtc aacatcaagc tgcgtgcccc cgggcaggag agcgccatct tcaatgaggt 360
ggctccaggc tacttctccc gggacggctg gcagctccag gttcaggag gcgtggcaca 420
gctggtgatc aaaggcgccc gggactccca tgctgggctg tacatgtggc acctcgtggg 480

```

```

acaccagaga aataacagac aagtcacgct ggaggtttca ggtgcagaac cccagtcgcg 540
ccctgacact gggttctggc ctgtgccagc ggtggtcact gctgtcttca tcctcttggg 600
cgctctggtc atgttcgcct ggtacaggtg ccgctgttcc cagcaacgcc gggagaagaa 660
gtttcttctc ctagaacccc agatgaaggt cgcagccctc agagcgggag cccagcaggg 720
cctgagcaga gctccgctg aactgtggac ccagactcc gagcccaccc caaggccgct 780
ggcactgggtg ttcaaaccct caccacttgg agccctggag ctgctgtccc cccaaccctt 840
gtttccatat gccgcagacc catagccgcc tgcaaggcag agaggacaca ggagagccag 900
ccctgagtgc cgaccttggg tggcggggcc tgggtctctc gtcccacccg gagggcacag 960
acaccggctt gcttggcagg ctgggcctct gtgtcaccca ctcttgggtg cgtgcagacc 1020
cttccccctc accccccagg tcttccaagc tctgttctct cagtttccaa aatggaacca 1080
cctcacctcc gcagcaccgc acttaccagg acgcatgccc ctccctctgc cctcatcaaa 1140
cccacagacc cggactccct ttctgccacc ccaggctggg ccggccccag gtgtgggggc 1200
cgctctctcc actcccagg ctccgcgccc aagtgagggg gcccctgccg gagcctcaga 1260
cacactggag ttccagggtg ggggggcctt ggcacatacc tgtcccttgg ctatgagcag 1320
gctttggggg cccttccgcg gcagccccgg gggccgaggt aggggtctgg ggcttagagg 1380
ctgggatggc tcttggcccc accgccaggg ggcaagcgca ggccgggctg ggaggcggcg 1440
gcggcgggctc gggctggggg gtcaggtgga cgctgcctcc ggggctgggtc gcgcatccct 1500
cagtcctctc gccaccggg ggtcgctccc tctgtcccac cgcacctgcc gagcctcttt 1560
ggaccagat ctgttcatgc ttttgtcttc gtcactgcgg cggggccctt tgatgtcttc 1620
atctgtatgg ggtggaaaaa tcaccgggaa tcccccttca gttctttgaa aaagttccat 1680
gactcgaata tctgaaatga agaaaacaaa ccgactcaca aacctccaag tagctccaaa 1740
tgcaattttt aaaatggaaa acaaaaatct gaaagaaacg tcttttagtg ctttaagccc 1800
caaaacgtcc ctaaggcgtc ctcgagatga agacggggg gagccccag ccaggtggag 1860
accccgagg acgcgggcg gcccggtgac cgaggcctcg cacagccggc cgccctgagg 1920
gtcggggcgg agccagggtc caagaggggc gcgtttgtgt ctcggtttaa aataagggtc 1980
cgtccgcgtg ctgggtcaga
2000

```

<210> 156

<211> 121

<212> DNA

<213> Homo sapiens

<220>

<223> CpG-enriched DNA, clone E18

<400> 156

```

cgggggcgcc ggtgctcgca ggggaggcgg gcgtggatcc cggggaagcc gccatgcccc 60
ccgcgtggac gccgtgagta ccgagccccg gcccccgagc cccggggcac cccggccgcg 120
a
121

```

<210> 157

<211> 1098

<212> DNA

<213> Homo sapiens

<220>

<223> caspase and RIP adaptor with death domain (CRADD);
 CASP2 and RIPK1 domain containing adaptor with death domain
 (CRADD); death domain containing protein CRADD

<400> 157

```

tccccgcgcc caaagatacg tggttgcaga cggagaaatg gaggccagag acaaacaagt 60
actccgctca cttcgcctgg agctgggtgc agaggtattg gtggagggac tggttcttca 120
gtacctctac caggaaggaa tcttgacgga aaaccatatt caagaaatca atgctcaaac 180
cacaggcctc cggaaaacaa tgctcctgct ggatataccta ccttccaggg gccctaaagc 240
atttgataca ttcttagatt ccctacagga gtttccctgg gtcagggaga agctgaagaa 300
ggcaagggaa gaggccatga ccgacctgcc tgcagggtgac agattgactg ggatccccctc 360
gcacatcctc aacagctccc catcagaccg gcagattaac cagctggccc agaggctggg 420
ccctgagtgg gagcccatgg tgctgtctct gggactgtcc cagacggata tctaccgctg 480
taaggccaac ccccccaaca acgtgcagtc gcaggtgggt gaggccttca tccgttggcg 540
gcagcgcttc gggaagcagg ccaccttcca gagcctgcac aacgggctgc gggctgtgga 600

```

```

ggtggacccc tcgctgctcc tgcacatggt ggagtgatgg tgcctccagc aaccgctggg 660
gagtgtgtcc ctgagtcagt tgggctgaat cctgactttc actcagagca ggtgggtttt 720
tgtgtaggtt tgttttttat ttttgatgat cttcagatgg aaggagaaaa cagggtttcc 780
actagacatc acttgaaagg ccagattact cagcagatct cccatgttgg ctcaacaatt 840
ctttgttttt aattgcttga agattgcatt gttgtaattg ttcagttttt aaatgtgtaa 900
tggcattttc aatagactag taaatcacag tgggtcaaaa tatatatcca tatatatata 960
tatcccatat atatatctca tgtcatcaca ttacaggcag gtgtctcata tgtaaaacat 1020
ttacctgaat gttgtctgag gactgaactg tggactttac tattcataat gataaaataa 1080
taaaatgcga attactat
1098

```

<210> 158

<211> 2920

<212> DNA

<213> Homo sapiens

<220>

<223> meprin 1A, meprin A alpha; N-benzoyl-L-tyrosyl-p-amino-benzoic acid hydrolase alpha subunit (PPH alpha); PABA peptide hydrolase; astacin metalloendopeptidase

<400> 158

```

cttcagcaaa tggcttggat tagatccact tgcattctct tttttacctt gctttttgce 60
cacatagcag ctgtaccgat taagcatctt cctgaagaaa atgtacatga tgcagatttt 120
ggtgaacaga aggatatttc agaaatcaat ttagctgcag gcttggacct ctttcaaggg 180
gacatcctct tgcagaaatc cagaaatggc ctgagagacc caaacaccag gtggacgttc 240
cccattcctt acatcttggc tgataatttg gggctgaatg ctaaaggagc cattctgtat 300
gcctttgaga tgttccgtct caagtcctgt gtggatttca agccctatga aggagagagc 360
tcatatatca tttttcaaca gtttgatggg tgctgggtct aggttgggtga ccaacatgtg 420
ggacagaaca tttccatttg ccaaggatgt gcctataagg ccatcataga acacgagatc 480
ctgcatgctt tgggatttta ccacgagcag tcaaggacgg accgggatga ttatgtgaac 540
atctggtggg accaaattct ttcaggttac cagcacaact ttgacaccta tgatgatagc 600
ttaatcacag accctaatac accctatgat tatgagtctt tgatgacta ccagcctttc 660
tcatttaaca agaatgcaag tgttcccacc atcacagcca agatccctga gtttaactcc 720
attatcggac aacgcctgga tttcagtgcc attgatttag agaggctgaa ccgaatgtac 780
aattgcacca caactcacac tcttttggac cactgtactt ttgagaaggc aaacatctgt 840
ggaatgattc agggcaccag agatgacact gactgggccc atcaggacag tgctcaggct 900
ggagaagtgg atcacacctt gttgggacaa tgcacagggt cgggctactt catgcagttc 960
agcaccagct cggggtccgc ggaagaggca gccctactgg agtctcggat tctttacca 1020
aagagggaagc agcagtgcct gcaatttttc tataaatga cgggaagtcc ttcagacaga 1080
ctcgttgtct gggtcaggag ggatgacagc acaggcaatg ttcgcaagtt ggtgaagggt 1140
cagacttttc aaggagatga tgaccacaat tggaaaattg cccatgtggt gctcaaagag 1200
gaacagaagt ttcgctacct tttccagggc acaaaaaggc accctcagaa ctcaactggg 1260
ggaatttacc tagatgacat cactctgaca gaaaccccct gcccacagg ggtctggaca 1320
gtccggaatt tctcccaagt ccttgagaac accagcaaaag gggacaagct tcagagccct 1380
cgattctaca attcggaggg atatggtttt ggggtaactt tatacccaaa tagcagagaa 1440
agctctgggt acttgagact tgcttttcat gtgtgcagtg gggagaacga tgctatcctg 1500
gagtggccgg tagaaaacag acaggtgata attaccatcc ttgaccagga gcctgatgtc 1560
cggaacagga tgtcctcaag catggtgttc actacctga agtcgcacac atctccagcg 1620
ataaatgaca ctgtcatctg ggacaggccg tccagggtgg gaacctatca tacagactgt 1680
aattgtttta gaagcatcga cttgggctgg agtggtttca tttcccacca aatgctgaa 1740
aggaggagtt tcctgaaaaa tgatgacctc atcatatttg tggactttga agatatcacc 1800
cacctcagcc agactgaagt tccctctaaa ggcaaaagac tgagccccc aaggcctcatt 1860
ctccaaggcc aggagcagca ggtctccgaa gaagggtcgg gaaaggccat gttagaggaa 1920
gccctacctg tcagcctgag ccaggggcag ccagcccgac agaagcggtc ggtggagaac 1980
acaggccccc tggaggacca taactggcca cagtacttca gagacccatg tgacccaaac 2040
ccttgccaaa atgacggcat ctgtgtgaac gtgaagggga tggcgagctg caggtgcac 2100
tctggacatg ctttcttcta cacgggggag cgctgtcagt cggccgaggt gcacggcagt 2160
gtcctgggca tgggtgatcg aggacggct ggcgtgatct tcttgacctt ctccatcatc 2220
gccatccttt cccaaaggcc aaggaagtga cctgacctgt ggcattggcc agaccacagc 2280
agcacctcct ccatgcaggc cttaactttc ccatgttcaa tgcagtttgg ggcagctttt 2340
ttatcagcct tgctttggat aggacctcca aggactaagc ctccagcccc atgtgtgacc 2400

```

cttgtcatct	ctctgcccc	cataattatg	ttacttttgc	atgtgctcct	aatgtatcta	2460
gtgtgtcctg	tgacaacact	catcacactt	cattgtaaat	cacttgtttt	attgactgtc	2520
tttccatag	actgtaagct	ccatgagggc	aggcacatgt	tgttctcatt	gaccgtgctg	2580
gccccagtgc	ctagatgcat	ggctggcaca	ttgttggcac	tcaacaatgg	ttgaatgaat	2640
aaaacaataa	atgaatgaat	aactaagata	tagaaactct	catttatatt	gcagattgaa	2700
tatatatgat	gaaattctta	tggtgaatat	gttagaatca	aatactcatt	tttcattaga	2760
tacagtagtg	tcatcactct	tttaagatct	tgttaaagat	ttcaaataaa	ggtagttctg	2820
gcgagccagg	ctgcacagca	tttgctttcc	tctgagattc	taagagaagg	cctttaataa	2880
atttaataaa	tattgagtta	gcaaaaaaaaa	aaaaaaaaaaa			2920

<210> 159

<211> 1615

<212> DNA

<213> Homo sapiens

<220>

<223> N-acetyl-transferase 1 (NAT1); arylamine

N-acetyltransferase (AAC1)

<400> 159

ctttgtataa	ggctcagcta	aaagggaaat	tgagtgggtc	aggtaccacg	gatactatac	60
actctattgc	atgattctcc	tgcctacatc	agaagacggt	tataagccta	ttttaaaagga	120
taccagttgg	aatctctctt	ttattaatca	ccaagagaac	catgaacaag	ctgtttatca	180
tttgactcat	catttaatct	tgatttccag	cttctcacac	ttgaaagaag	acataataca	240
tttctcacag	gattctggga	ctattaactg	aacttatgtg	tgtaaaagga	attcatacaa	300
tgaaagcact	agaaataatt	attatactta	taaccattgt	atttttacat	gtttaaaata	360
tagccataat	tagcctactc	aaatccaagt	gtaaaagtaa	aatgatttgc	tttcgttttg	420
ttttccttgc	ttaggggatc	atggacattg	aagcatatct	tgaaagaatt	ggctataaga	480
agtctaggaa	caaattggac	ttggaaacat	taactgacat	tcttcaacac	cagatccgag	540
ctgttccttt	tgagaacctt	aacatccatt	gtgggggatgc	catggactta	ggcttagagg	600
ccatttttga	tcaagttgtg	agaagaaatc	ggggtggatg	gtgtctccag	gtcaatcatc	660
ttctgtactg	ggctctgacc	actatttggt	ttgagaccac	gatgttggga	gggtatgttt	720
acagcactcc	agccaaaaaa	tacagcactg	gcatgattca	ccttctcctg	caggtgacca	780
ttgatggcag	gaactacatt	gtcgatgctg	ggtttggacg	ctcataccag	atgtggcagc	840
ctctggagtt	aatttctggg	aaggatcagc	ctcaggtgcc	ttgtgtcttc	cgtttgacgg	900
aagagaatgg	attctggtat	ctagaccaa	tcagaaggga	acagtacatt	ccaaatgaag	960
aatttcttca	ttctgatctc	ctagaagaca	gcaaataccg	aaaaatctac	tcctttactc	1020
ttaagcctcg	aacaattgaa	gatttttgagt	ctatgaatac	atacctgcag	acatctccat	1080
catctgtgtt	tactagtaaa	tcattttgtt	ccttgcagac	cccagatggg	gttcaactgt	1140
tggtgggctt	caccctcacc	cataggagat	tcaattataa	ggacaatata	gatctaatag	1200
agttcaagac	tctgagttag	gaagaaatag	aaaaagtgc	gaaaaatata	tttaatat	1260
ccttgcagag	aaagcttgtg	cccaaacatg	gtgatagatt	ttttactatt	tagaataagg	1320
agtaaaacaa	tcttgtctat	ttgtcatcca	gtcaccagt	tatcaactga	cgacctatca	1380
tgatcttctt	gtacccttac	cttattttga	agaaaatcct	agacatcaaa	tcatttccac	1440
tataaaaaatg	tcatcatata	taattaaaca	gcttttttaa	gaaacataac	cacaaacctt	1500
ttcaaataat	aataataata	ataataataa	atgtatttta	aagatggcct	gtgggttatct	1560
tggaaattgg	tgattttatgc	tagaaagctt	ttaatgttgg	tttattgttg	aattc	1615

<210> 160

<211> 2966

<212> DNA

<213> Homo sapiens

<220>

<223> protein phosphatase 2 catalytic subunit, alpha isoform

(PPP2CA); protein phosphatase 2A catalytic subunit-alpha

<400> 160

aaccaccggc	gaggagcggg	gcgcggtgaa	gcgagccgcg	gtccgaggcc	caaagaaaag	60
cccaagcctc	gccccgcga	tcgcgccga	cgagacacct	aggtccgggg	acgggtgtgt	120
gccgcggaag	tcaggtgcac	tgccgcagac	tcccccggtg	ggtacacgct	cctccacctg	180

cgagtgacct	aattacaagg	tgccagccgc	gcccagaggt	gggggtggtt	aatccaagcg	240
gccactcgct	gcccgttcct	gcccccaaag	atgacggaaa	cccacacgat	tacagagccg	300
cagcaccoca	gatgagccac	ggggtcgcaa	ttctcgtttc	cgtgatcgga	ctgccaggcc	360
ccaggtgagg	agctgagttc	atcaccagag	cggccttccc	aggggaacca	gttacaggct	420
gccagtgggc	ccggcttcca	tccggtctgc	gcctgcgcgc	ggcccaagcc	ctcgccctctc	480
ctggaatagt	gctcagggat	tagtccgggt	cgccgctgtg	ccactgcgca	tgctccagct	540
ccatccttcc	cttccccccac	caccccgccc	tccgggagcc	acgccccaaa	agtcaaggcg	600
cttcagttac	cagccggcta	cgtggcctgc	gctttgaccc	ccagtttgcg	ccccaaactcc	660
ggtcgtgagg	ccgcccgggg	agggtctctgc	agttgcgcag	cttgctcccc	ggccctttttc	720
ccctccgctc	cccgcgcgct	cctgacgcgc	ggcgtgacgt	caccacgccc	ggcggccgccc	780
attacagaga	gccgagctct	ggagcctcag	cgagcggagg	aggaggcgca	gggccgacgg	840
ccgagtactg	cggtgagagc	cagcggggcca	gcgccagcct	caacagccgc	cagaagtaca	900
cgaggaaccg	gcggcggcgt	gtgcgtgtag	gcccgtgtgc	gggcggcggc	gcgggaggag	960
cgcggagcgg	cagccggctg	ggcggggtgg	catcatggac	gagaagggtg	tcaccaagga	1020
gctggaccag	tggatcgagc	agctgaacga	gtgcaagcag	ctgtccgagt	cccagggtcaa	1080
gagcctctgc	gagaaggcta	aagaaatcct	gacaaaagaa	tccaacgtgc	aagagggttcg	1140
atgtccagtt	actgtctgtg	gagatgtgca	tgggcaattt	catgatctca	tggaactggt	1200
tagaattggg	ggcaaatac	cagatacaaa	ttacttgttt	atgggagatt	atgttgacag	1260
aggatattat	tcagttgaaa	cagttacact	gcttgtagct	cttaaggttc	gttaccgtga	1320
acgcataccc	attcttcgag	ggaatcatga	gagcagacag	atcacacaag	tttatggttt	1380
ctatgatgaa	tgtttaagaa	aatatggaaa	tgcaaattgt	tggaatatatt	ttacagatct	1440
ttttgactat	cttctctca	ctgccttggg	ggatgggcag	atcttctgtc	tacatgggtg	1500
tctctcgcca	tctatagata	caactggatca	tatcagagca	cttgatcgcc	tacaagaagt	1560
tccccatgag	gggtccaatgt	gtgacttgct	gtggtcagat	ccagatgacc	gtgggtggtg	1620
gggtatatct	cctcgaggag	ctggttacac	ctttgggcaa	gatatttctg	agacatttaa	1680
tcatgccaat	ggcctcacgt	tgggtgtctag	agctcaccag	ctagtgatgg	agggatataa	1740
ctggtgccat	gaccggaatg	tagtaacgat	tttcagtgtc	ccaaactatt	gttatcgttg	1800
tggtaaccaa	gctgcaatca	tggaaactga	cgatactcta	aaatactctt	tcttgcagtt	1860
tgaccagca	cctcgtagag	gcgagccaca	tgttactcgt	cgtaccccag	actacttcct	1920
gtaatgaaat	tttaaacttg	tacagtattg	ccatgaacca	tatatcgacc	taatggaaat	1980
gggaagagca	acagtaactc	caaagtgtca	gaaaatagtt	aacattcaaa	aaacttgttt	2040
tcacatggac	caaaagatgt	gcatataaaa	aatacaaaagc	ctcttgatcat	caacagccgt	2100
gaccacttta	gaatgaacca	gttcattgca	tgctgaagcg	acattggttg	tcaagaaacc	2160
agtttctggc	atagcgctat	ttgtagttac	ttttgctttc	tctgagagac	tgagataaat	2220
aagatgtaaa	cattaacacc	tcgtgaatac	aatttaactt	ccatttagct	atagctttac	2280
tcagcatgac	tgtagataag	gatagcagca	aacaatcatt	ggagcttaat	gaacattttt	2340
aaaaataatt	accaaggcct	cccttctact	tgtgagtttt	gaaattgttc	tttttatatt	2400
cagggatacc	gtttaattta	attatatgat	ttgtctgcac	tcagttttatt	ccctactcaa	2460
atctcagccc	catgttggtc	tttggtattg	tcagaacctg	gtgagttggt	ttgaacagaa	2520
ctgttttttc	ccctcctgtg	aagacgatgt	gactgcacaa	gagcactgca	gtgtttttca	2580
taataaaactt	gtgaactaag	aactgagaag	gtcaaatttt	aattgtatca	atgggcaaga	2640
ctgggtgctgt	ttattaaaaa	agttaaatca	attgagtaaa	ttttagaatt	tgtagacttg	2700
taggtaaaat	aaaaatcaag	ggcactacat	aacctctctg	gtaactcctt	gacattcttc	2760
agattaactt	caggatttat	ttgtatttca	catattacaa	tttgtcacat	tggtggtgtg	2820
cactttgtgg	gttcttcctg	catattaact	tgtttgtaag	aaaggaaatc	tgtgctgctt	2880
cagtaagact	taattgtaaa	accatataac	ttgagattta	agtctttggg	ttgtgtttta	2940
ataaaacagc	atgttttcag	gtagag				2966

<210> 161
 <211> 1119
 <212> DNA
 <213> Homo sapiens

<220>
 <223> tetraspanin-3 (Tspan3); transmembrane 4 superfamily
 tetraspan TM4SF; globin regulator, clone 52, globin promoter
 trans-activator

<400> 161
 acaactactc agactgggaa aatacagatt ggttcaaaga aacaaaaaac cagagtgtcc 60
 ctcttagctg ctgcagagag actgccagca attgtaatgg cagcctggcc cacccttccg 120


```

acctctatgc tgaggggtgt gaggctctag ttgtgaagaa gctacaagaa atcatgatgc 180
atgtgatctg ggccgcactg gcatttgagc tattcagctg ctgggcatgc tgtgtgcttg 240
catcgtgttg tgcagaagga gtagagatcc tgcttacgag ctccctcatca ctggcggaac 300
ctatgcatag ttgacaactc aagcctgagc tttttggtct tgttctgatt tggagggtga 360
attgagcagg tctgctgctg ttggcctctg gagttcattt agttaaagca catgtacact 420
ggtgttgagc agagcagctt ggcttttcat gtgccacact acttacctac tacctgcgac 480
tttcttttct cttgttctag ctgactcttc atgcccctaa gattttaagt acgatggtga 540
acgcttctaa tttcagaacc aattgcgagt catgtagtgt ggtagaatta aaggaggaca 600
cgagcctgct tctgttacct ccaagtggta acaggactga tgccgaaatg tcaccaggtc 660
ctttcagtct tcacagtggg gaactcttgg ccaaagggtt ttgggggggag gaggaggaaa 720
ccagctttct ggtaaggtt aacaccagat ggtgcccctc attggtgtcc ttttaaaaaa 780
tatttactgt agtccaataa gatagcagct gtacaaaatg actaaaatag attgtaggat 840
catatggcgt atatcttggg tcatcttgaa aatcagagac tgagctttga aactagtggg 900
ttttaatcaa agttggcttt ataggaggag tataatgtat gcactactgt tttaaaagaa 960
ttagtgtgag tgtgtttttg tatgaatgag ccattcatg gtaagtctta agcttgttgg 1020
aaataatgta cccatgtaga ctagcaaaat agtatgtaga tgtgatctca gttgtaaata 1080
gaaaaatcta attcaataaa ctctgtatca gccccaac 1119

```

<210> 162

<211> 852

<212> DNA

<213> Homo sapiens

<220>

<223> platelet activating factor (PAF) acetylhydrolase isoform 1b,
gamma subunit (PAFAH1B3)

<400> 162

```

ggacggtcct ttgttgccgc gaggggtagg agtgggcgtg gcggagccag ctccgttcgg 60
aacactcccg ggccgaccgc actcgtcat cctgcaggag ctgcggcgcc aagatgagtg 120
gagaggagaa cccagccagc aagcccacgc cgtgacagga cgtacagggc gacgggcgct 180
ggatgtccct gcaccatcgg ttcgtggctg acagcaaaga taaggaacct gaagtcgtct 240
tcatcgggga ctcttggtc cagctcatgc accagtgcga gatctggcgc gagctcttct 300
ctcctctgca tgacttaac tttggcattg gtggtgacgg cacacagcat gtactgtggc 360
ggctggagaa tggggagctg gaacacatcc ggccaagat tgtggtggtc tgggtgggca 420
ccaacaacca cggacacaca gcagagcagg tgactggtgg catcaaggcc attgtgcaac 480
tggtgaatga gcgacagccc caggcccggg ttgtggtgct gggcctgctt ccgcgaggcc 540
aacatcccaa cccacttcgg gagaagaacc gacaggtgaa cgagctggta cgggcggcac 600
tggtgggcca ccctcgggcc cacttccctag atgccgacct tggctttgtg cactcagatg 660
gcaccatcag ccatcatgac atgtatgatt acctgcatct gagccgctg ggctacacac 720
ctgtttgccg ggctctgcac tccctgcttc tgcgtctgct ggccaagac cagggccaag 780
gtgctccctt gctggagccc gcaccctaag catcctgctg cttcccaca acattaaact 840
ctccttcttc ag 852

```

<210> 163

<211> 874

<212> DNA

<213> Homo sapiens

<220>

<223> tetranectin A (TNA); plasminogen binding protein;
plasminogen-kringle 4 binding protein

<400> 163

```

gggcgggaag acgtgcagcc tgggccgtgg ctgctcactg cgttcggacc cagacccgct 60
gcaggcagca gcagcccccg cccgcgcacg agcatggagc tctggggggc ctacctcttc 120
ctctgcctct tctccctctt gaccaggtc accaccgagc caccaacca gaagcccaag 180
aagattgtaa atgccaagaa agatgttgtt aacacaaaga tgtttgagga gctcaagagc 240
cgtctggaca ccctggccca ggaggtggcc ctgctgaagg agcagcaggc cctgcagacg 300
gtctgcctga aggggaccaa ggtgcacatg aaatgcttct tggccttcac ccagacgaag 360
accttcacg aggccagcga ggactgcac tgcgcggggg gcaccctgag caccctcag 420

```

```

actggctcgg agaacgacgc cctgtatgag tacctgcgcc agagcgtggg caacgaggcc 480
gagatctggc tgggcctcaa cgacatggcg gccgagggca cctgggtgga catgaccggc 540
gcccgcacgc cctacaagaa ctgggagact gagatcaccg cgcaaccgga tggcggcaag 600
accgagaact gcgcggtcct gtcaggcgcg gccaacggca agtgggtcga caagcgtgc 660
cgcgatcagc tgccctacat ctgccagttc ggatcgtgt agccggcggg gcgggggccc 720
tggggggcct ggaggagggc aggagccgcg ggaggccggg aggagggtgg ggaccttgca 780
gcccccatcc tctccgtgcg cttggagcct ctttttgcaa ataaagttag tgcacgttcg 840
cggagaggaa aaaaaaaaaa aaaaaaaaaa aaaa
874

```

<210> 164

<211> 871

<212> DNA

<213> Homo sapiens

<220>

<223> preprokallikrein; kallikrein 1 (KLK1) clone phKK25;
kallikrein, renal/pancreas/salivary (KLKR)

<400> 164

```

tcctccacct gctggccctt ggacacctct gtcaccatgt gggttcctggt tctgtgcctc 60
gccctgtccc tgggggggac tgggtgtgcg ccccgatttc agtcccggat tgtgggaggc 120
tgggagtgtg agcagcattc ccagccctgg caggcggctc tgtaccattt cagcactttc 180
cagtgtgggg gcatcctggt gcaccgccag tgggtgctca cagtgtctca ttgcatcagc 240
gacaattacc agctctgggt ggggtcgccac aacttgtttg acgacgaaaa cacagcccag 300
tttgttcatt tcatgtgagag cttcccacac cctggcttca acatgagcct cctggagaac 360
cacacccgcc aagcagacga ggactacagc cagcacttca tgctgtctcg cctgacagag 420
cctgctgata ccatcacaga cgtgtggaag gtcgtggagt tgcccaccca ggaacccgaa 480
gtggggagca cctgtttggc ttccggcttg ggcagcatcg aaccagagaa tttctcattt 540
ccagatgatc tccagtgtgt ggacctcaaa atcctgccta atgatgagtg cgaaaaagcc 600
cacgtccaga aggtgacaga cttcatgctg tgtgtcggac acctggaagg tggcaaagac 660
acctgtgtgg gtgattcagg gggcccgcct atgtgtgatg gtgtgtctca aggtgtcaca 720
tcatggggct acgtcccttg tggcaccccc aataagcctt ctgtcgccgt cagagtgtctg 780
tcttatgtga agtggatcga ggacaccata gcggagaact cctgaacgcc cagccctgtc 840
ccctaccccc agtaaaatca aatgtgcata c
871

```

<210> 165

<211> 1196

<212> DNA

<213> Homo sapiens

<220>

<223> enoyl CoA hydratase 1, peroxisomal (ECH1); peroxisomal
enoyl-coenzyme A hydratase-like protein; dienoyl CoA
isomerase; delta3,5-delta2,4-dienoyl-CoA isomerase; HPXEL

<400> 165

```

ggaactcagt agacgaaggc ggcggcgatg gcggcgggga tagtggcttc tcgcagactc 60
cgcgacctac tgacccggcg actgacaggc tccaactacc cgggactcag tattagcctt 120
cgccctactg gtcctctctg acaagaggag gcttccggag tagccctcgg tgaagcccca 180
gaccacagct atgagtcctt tcgtgtgacg tctgcgcaga aacatgttct gcatgtccag 240
ctcaaccggc ccaacaagag gaatgccatg aacaaggctt tctggagaga gatggttaga 300
tgcttcaaca agatttcgag agacgctgac tgtcggggcg tggatgatctc tgggtgcagg 360
aaaatgttca ctgcaggatg tgacctgatg gacatggctt cggacatcct gcagcccaaa 420
ggagatgatg tggcccggat cagctgggtac ctccgtgaca tcatcactcg ataccaggag 480
accttcaacg tcatcgagag gtgccccaaag cccgtgattg ctgccgtcca tgggggctgc 540
attggcggag gtgtggacct tgtcaccgcc tgtgacatcc ggtactgtgc ccaggatgct 600
ttcttccagg tgaaggagggt ggacgtgggt ttggctgccg atgtaggaac actggagcgc 660
ctgccccagg tcatcggaag ccagagcctg gtcaacgagc tggccttcac cgcccacaag 720
atgatggctg acgaggccct ggacagtggg ctggtcagcc ggggtgttccc agacaaagag 780
gtcatgctgg atgctgcctt acccctggcg cccgagattt ccagcaagac caccgtgttg 840
gtgcagagca ccaaggatca cctgctgtat tcccgcgacc attcgggtggc cgagagcctc 900

```

```

aactacgtgg cgctcctggaa catgagcatg ctgcagaccc aagacctcgt gaagtcgggtc 960
cagcccacga ctgagaacaa ggaactgaaa accgtcacct tctccaagct ctgagagccc 1020
tcgctgccc gcccagcca gggggccggc cttgtcccg ctcacccaca gaaagggagg 1080
atgggcgatg acagttgttt ctatgccttc tgacccagtt tcccagttta taactttatg 1140
acaatgagtt tctcaagccc aaggccttat cttcacccca caaacaataa agcaaa 1196

```

<210> 166

<211> 2058

<212> DNA

<213> Homo sapiens

<220>

<223> 3-hydroxy-3-methylglutaryl coenzyme A synthase 2;
mitochondrial HMG CoA synthase 2 (HMGCS2); hydroxymethyl-CoA
synthase; hydroxymethylglutaryl-CoA synthase

<400> 166

```

cggtttctgc tgggtttctg aactgctggg tttctgcttg ctctcttga gatgcagcgt 60
ctgttgactc cagtgaagcg cattctgcaa ctgacaagag cggcgcagga aacctccctc 120
acacctgtc gcctgtctcc agtagccac caaagggttt ctacagcctc tgctgtcccc 180
ctggccaaaa cagatacttg gccaaaggac gtgggcatcc tggccctgga ggtctacttc 240
ccagcccaat atgtggacca aactgacctg gagaagtata acaatgtgga agcaggaaaag 300
tatacagtgg gcttgggcca gaccgtatg ggcttctgct cagtccaaga ggacatcaac 360
tcctgtgcc tgacggtggg gcaacggctg atggagcgca tacagctccc atgggactct 420
gtgggcaggc tggaagtagg cactgagacc atcattgaca agtccaaagc tgtcaaaaaca 480
gtgctcatgg aactcttcca ggattcaggc aatactgata ttgagggcat agataccacc 540
aatgcctgct acggtggtac tgctccctc ttcaatgctg ccaactggat ggagtccagt 600
tcctgggatg gtctgttatg catggtggtc tgtggagaca ttgccgtcta tcccagtggt 660
aatgctcgtc ccacaggtgg ggccggagct gtggctatgc tgattggccc aaaggcccct 720
ctggcccttg agcgagggtg gaggggaacc catatggaga atgtgtatga cttctacaaa 780
ccaaatttgg cctcggagta cccaatagtg gatgggaagc ttccatcca gtgctacttg 840
cgggccttgg atcgatgtta cacatcatac cgtaaaaaaa tccagaatca gtggaagcaa 900
gctggcagcg atcgaccctt cacccttgac gatttacagt atatgatctt tcatacacc 960
ttttgcaaga tggctccagaa gtctctggct cgctgatgt tcaatgactt cctgtcagcc 1020
agcagtgaca cacaaccag cttatataag gggctggagg ctttcggggg gctaaagctg 1080
gaagacacct acaccaacaa ggacctggat aaagcacttc taaaggcctc tcaggacatg 1140
ttcgacaaga aaaccaaggc ttccctttac ctctccactc acaatgggaa catgtacacc 1200
tcacccctgt acgggtgcct ggctctgctt ctcttatggc tctggtttag cagcaagttt cttttcattt 1320
ggctccagga ttggtgcctt ctcttatggc tctggtttag cagcaagttt cttttcattt 1320
cgagtatccc aggatgctgc tccaggctct cccctggaca agttggtgtc cagcacatca 1380
gacctgccaa aacgcctagc ctcccgaag tgtgtgtctc ctgaggagtt cacagaaata 1440
atgaacaaaa gagagcaatt ctaccataag gtgaatttct cccacctgg tgacacaaac 1500
agccttttcc caggtacttg gtacctggag cgagtggacg agcagcatcg ccgaaagtat 1560
gcccggcgct ccgtctaaag gtgttctgca gatccatgga aagcttctct ggaaacgtat 1620
gctagcagag cttctccccg tgaatcatat ttttaagatc ccactcttag ctggtaaatg 1680
aatttgaatc gacatagtag ccccataagc atcagccctg tagagtgagg agccatctct 1740
agcgggcccct tcattcctct ccattgctgca atcactgtcc tgggcttatg gtgcctatgg 1800
actaggggtc ctttgtgaaa gagcaagatg gagcaatgga gagaagacct cttcctgaat 1860
cactggactc cagaaatgtg catgcagatc agctgttgcc ttcaagatcc agataaaactt 1920
tcctgtcatg tgttagaact ttattattat taatattgtt aaacttctgt gctgttctctg 1980
tgaatctcca aattttgtac cttgttctaa gctaatatat agcaattaaa aagagagaaa 2040
gagaaaaaaa aaaaaaaa

```

2058

<210> 167

<211> 3976

<212> DNA

<213> Homo sapiens

<220>

<223> SREBP cleavage-activating protein (SCAP); KIAA0199

<400> 167

cctgactgaa	aggctgcgtg	agaagatata	tccggccttc	tacaaccatg	ggctcctctg	60
tgcatacctat	cccatcccca	tcatacctctt	cacagggttc	tgcataccttag	cctgctgcta	120
cccactgctg	aaactcccct	tgccaggaac	aggacctgtg	gaattcacca	cccctgtgaa	180
ggattactcg	ccccacctg	tggactctga	cgcgaaacaa	ggagagccta	ctgagcagcc	240
tgagtgggtat	gtgggtgccc	cggtggctta	tgtccagcag	atatttgtga	agtcctcagt	300
gtttccctgg	cacaagaacc	tcctggcagt	agatgtatctt	cgttcacctt	tgtcccgggc	360
attccaactg	gtggaggaga	tcgggaacca	cgtgctgaga	gacagctctg	ggatcaggag	420
cttgaggagg	ttgtgtctgc	aagtgaccga	cctgctgcca	ggccttagga	agctcaggaa	480
cctactccct	gagcatggat	gcctgctgct	gtccctggg	aacttctggc	agaatgactg	540
ggaacgcttc	catgctgata	ctgacatcat	tgggaccatc	caccagcacg	agcctaaaac	600
cctgcagact	tcagccacac	tcaaagactt	gttatttgg	gttcctggga	agtacagcgg	660
ggtgagcctc	tacaccagga	agaggatggt	ctcctacacc	atcacccctg	tcttccagca	720
ctaccatgcc	aagtccctgg	gcagcctgcg	tgcgcgctg	atgcttctgc	accccagccc	780
caactgcagc	cttcggggcg	agagcctggt	ccacgtgcac	ttcaaggagg	agattgggtg	840
cgctgagctc	atcccccttg	tgaccaccta	catcatcttg	tttgccctaca	tctacttctc	900
cacgcggaag	atcgacatgg	tcaagtccaa	gtgggggctg	gccctggctg	ccgtggtcac	960
agtgtctcagc	tcgctgctca	tgtctgtggg	actctgcaca	ctcttcggcc	tgacgcccac	1020
cctcaatggc	ggcgagattt	tcccctacct	tgtgggtggt	attgggttag	agaatgtggt	1080
ggtgctcacc	aagtctgtgg	tctcaacccc	ggtagacctg	gaggtgaagc	tgcggatcgc	1140
ccaaggccta	agcagcgaga	gctggtccat	ctagaagaac	atggccacgg	agctgggcat	1200
catectcatc	ggctaactta	ccctagtgcc	cgccatccag	gagttctgtc	tcttctgtgt	1260
cgtggggctg	gtgtctgact	tcttccctca	gatgctgttt	ttcaccactg	tcctgtccat	1320
tgacattcgc	cggatggagc	tagcagacct	gaacaagcga	ctgccccctg	aggcctgcct	1380
gccctcagcc	aagccagtgg	gacagccaac	gcgctacgag	cggcagctgg	ctgtgaggcc	1440
gtccacaccc	cacaccatca	cgttgccagc	gtcttccttc	cgaaacctgc	ggctccccaa	1500
gaggctgcgt	gttgtctact	tcctggccc	caccgcctg	gcacagcgcc	tcatacatggc	1560
tggcaccgtt	gtctggattg	gcatacctggt	atacacagac	ccagcagggc	tcgcgaacta	1620
cctcgctgcc	caggtgacgg	aacagagccc	attgggtgag	ggagccctgg	ctcccatgcc	1680
cgtgcctagt	ggcatgctgc	ccccagccc	cccgaccct	gccttctcca	tcttcccacc	1740
tgatgccctt	aagctacctg	agaaccagac	gtcgccaggc	gagtcacctg	agcgtggagg	1800
tccagcagag	gttgtccatg	acagccagct	cccagaggta	acctgggggc	ctgaggatga	1860
ggaactttgg	aggaaattgt	ccttccgcca	ctggccgacg	ctcttcagct	attacaacat	1920
cacactggcc	aagaggtaca	tcagcctgct	gcccgtcatc	ccagtcacgc	tcgcctgaa	1980
cccgagggag	gctctggagg	gcccgcaccc	tcaggacggc	cgcagtgcct	ggccccacc	2040
ggggcccata	cctgctgggc	actgggaagc	aggacccaag	ggcccagggtg	gggtgcaggc	2100
ccatggagac	gtcacgctgt	acaaggtggc	ggcgtgggc	ctggccaccg	gcatacgtctt	2160
gggtgctgctg	ctgctctgcc	tctaccgcgt	gctatgccc	cgcaactacg	ggcagctggg	2220
tgggtggggccc	ggcgggcgga	ggcgggggga	gctgcctgc	gacgactacg	gctatgcgcc	2280
acccgagacg	gagatcgtgc	cgcttgtgct	gcgcggccac	ctcatggaca	tcgagtgcct	2340
ggccagcgac	ggcatgctgc	tgggtgagctg	ctgcctggca	ggccacgtct	gcgtgtggga	2400
cgcgcagacc	ggggattgcc	taacgcgcct	tccgcgccc	ggcaggcagc	ggcgggacag	2460
tggcgtgggc	agcgggcttg	aggctcagga	gagctgggaa	cgactttcag	atggtgggaa	2520
ggctgggtcca	gaggagcctg	gggacagccc	tcccctgaga	caccgcccc	ggggccctcc	2580
gccgccttcc	ctcttcgggg	accagcctga	cctcacctgc	ttaattgaca	ccaacttttc	2640
agcgcagcct	cggctcctcac	agcccactca	gcccagagccc	cggcacccgg	cgggtctgtg	2700
ccgctctcgg	gactccccag	gctatgactt	cagctgcctg	gtgcagcggg	tgtaccagga	2760
ggaggggctg	gcggccgtct	gcacaccagc	cctgcgccc	ccctcgccctg	ggccggtgct	2820
gtcccaggcc	cctgaggacg	agggtggctc	ccccgagaaa	ggctcccctt	ccctcgccctg	2880
ggcccccagt	gccgaggggt	ccatctggag	cttgaggctg	cagggcaacc	tcatacgtggt	2940
ggggcgggagc	agcggccggc	tggaggtgtg	ggacgccatt	gaaggggtgc	tgtgctgcag	3000
cagcgaggag	gtctcctcag	gcattaccgc	tctggtgttc	ttggacaaaa	ggattgtggc	3060
tgcacggctc	aacgggttccc	ttgatttctt	ctccttgag	accacactg	ccctcagccc	3120
cctgcagttt	agagggaccc	cagggcgggg	cagttccctt	gcctctccag	tgtacagcag	3180
cagcgacaca	gtggcctgtc	acctgaccca	cacagtgcc	tgtgcacacc	aaaaacccat	3240
cacagccctg	aaagccgctg	ctgggcgctt	ggtgactggg	agccaagacc	acacactgag	3300
agtgttccgt	ctggaggact	cgtgctgcct	cttcaccctt	cagggccact	caggggccat	3360
cacgaccgtg	tacattgacc	agaccatggt	cctggccagt	ggaggacaag	atggggccat	3420
ctgcctgtgg	gatgtactga	ctggcagccg	ggtcagccat	gtgtttgtct	accgtgggga	3480
tgtcacctcc	cttacctgta	ccacctcctg	tgtcatcagc	agtggcctgg	atgacctcat	3540
cagcatctgg	gaccgcagca	caggcatcaa	gttctactcc	attcagcagg	acctgggctg	3600

tgggtgcaagc	ttgggtgtca	tctcagacaa	cctgctgggtg	actggcggcc	agggctgtgt	3660
ctccttttgg	gacctaaact	acggggacct	gttacagaca	gtctacctgg	ggaagaacag	3720
tgaggcccag	cctgcccgcg	agatcctggg	gctggacaac	gctgccattg	tctgcaactt	3780
tggcagttag	ctcagcctgg	tgtatgtgcc	ctctgtgctg	gagaagctgg	actgagcgca	3840
gggcctcctt	gccagggcag	gaggctgggg	tgctgtgtgg	gggccaatgc	actgaacctg	3900
gacttggggg	aaagagccga	gtatcttcca	gocgctgcct	cctgactgta	ataatattaa	3960
acttttttaa	aaaacc					3976

<210> 168

<211> 3600

<212> DNA

<213> Homo sapiens

<220>

<223> guanylate cyclase activator 2B (GCAP-II, GUCA2B);
guanylate cyclase C activating peptide II; uroguanylin

<400> 168

ttctctctga	cccaaccttc	aaccactggg	gcagtagggt	atgcattgcc	tagaaggcaa	60
ctgtaagatt	caggggctgc	tatggatgca	ttacccaaga	gataagggca	acctcagggtg	120
ggccgggggc	ctcacagcaa	ccttacgaga	ggggttgtat	catgcccatt	tgatggaaga	180
gaaaactaag	attccattag	aattgatgtg	acgtatccta	aatcacacag	ctgcagcagg	240
actaggattt	gaatgcgggt	caatctgcct	ccaacactac	tgccctttcc	tccatgctgg	300
attaggctat	tggcttctga	aagcacagac	aggtgagatg	ggcacaacat	ggcctgaagc	360
acccaggcac	aggtgggaga	tggcaagcag	aggcagggtc	aaaacgtggg	gccaggactg	420
gtctgaaaga	tagtcgttaa	atagcactga	ggagagggag	tgagagagat	gtgggtcttg	480
ggggagtggg	gtcttgagaa	ccctgaaatc	agcagtgtct	gcccactttg	ccctggacca	540
gcctctctgt	ctgtatcctt	ccccagagaa	agggaccatg	ggctgacctg	ggccaaggac	600
acctggctgg	agcccccttc	ctgacattaa	ctagctccgt	gacctgggga	aagccaccct	660
ccctcctgag	cctcactttt	cctgtctgta	aaatggcctc	cccgctcatc	caccacacaca	720
ggtgtcttga	ggagtgaatg	atggtgtgtc	ccaaggcccc	catggagagc	ccagcacatg	780
gcaggcactc	ggtattcaag	cactgtgttc	ccatagactt	tgggctcctg	ccctcctcgc	840
ccccaacccc	cttcctagga	accagccccg	gcttgtcaga	gagccagcta	gctgtcaacc	900
ccaccccagc	tggccagtta	atgagtgacc	aggactcctg	agcctgacct	ataaggaggt	960
gctaggcagg	gacacagatg	ggagacggtg	gacagcggca	gggggaaccc	agggagcgcg	1020
atgggctgca	gggctgcatc	agggctcctg	ccaggagtgg	ccgtggctct	cctgctgctg	1080
ctgcagagca	cacagtcagt	ctacatccag	gtgagtcctt	tggccagcgt	tccctttgcc	1140
tgaaggggccc	catggtggga	ggctaggctg	gagaggggtg	actgggaatt	cagagggggca	1200
cogggggagc	acggggcccg	gggctcagcc	caacacccat	cacagcccaa	agaccaaggc	1260
agctggtggg	tgggggcagc	cagatgtttg	atggcagtga	tgatggcaat	gacaacacca	1320
aactgattca	gcgctgctcc	cctcaaaggc	ccgtgctggg	cacagaggtc	aggggtgtga	1380
acagaaggct	cctccttgca	tgggaggagg	ccagaaaggg	aaggagacac	cctgttatgc	1440
tcccacagtt	ccgtatatte	acccacatgt	aggtggagga	ggacaggctc	cagaaaaatt	1500
ttcctgagaa	gtaacccttg	agctggcatt	gcaagatgaa	caggaggttg	ccagacacag	1560
atgatgggga	aactgttcca	ggccaagggg	cacagcatgt	gcaaagacca	gatagaagac	1620
tatgggggtt	ccagtgcctt	tccagggggc	atgggagagt	ggcagtagtc	gtcacagcag	1680
ggcctgtctg	ccacgtcaca	ggggatgctg	ctggcctcgc	ccagcatagc	agagacgtct	1740
gtggccctgg	gtgtcacatc	cctgactctg	ggcatggtct	ccttggaag	aacaaagtgg	1800
gtcccagaga	gggggtgcag	agacttggcc	tccccacag	ccctggcctc	agagaccagc	1860
taacttggggc	tgccatcact	ctgccatgtg	agctcaggca	ggcgtaactc	gttagtgatt	1920
gtgccctggg	accaggcccc	cacgggagat	gtcagatgag	ggaactgagg	ctgagtgggg	1980
aacagacagg	cagccgggtc	tgggcagagg	tgggatttga	accagggctt	gtctgtctct	2040
aaagcctcga	accgctgtgc	tccacagccc	cgtgtcttct	tcctcacacc	tctcacccga	2100
gcggctcttt	ccagtgtggc	cctggacttc	ccatagagac	ggggaaggct	ctggaggatc	2160
tgcagggttt	gagcaaccct	gggtgtcatg	gaagtgcctg	cccctggacc	aggtcttgac	2220
ctgtctctat	ctcctctccc	ctgtctgtag	taccaaggct	tccgggtcca	gctggaatcc	2280
atgaagaagc	tgagtgcact	ggaggcacag	tgggcaccca	gccccgcctt	gcaggccccag	2340
agcctcctgc	ccgcctgtgt	ccaccacctt	gctctgcctc	aggaccttca	gcctgtctgc	2400
gcctcgcagg	aggcttccag	catcttcaag	acctctgagta	agtgcctccg	ctccttgacg	2460
aacctcgctc	tgtctcctcc	cacgcccagg	ctcctccacc	tgggttggtt	ctcttaagca	2520
cccagcggct	gaggatgggg	agattcaagt	aactcaggcc	ctgtcccact	ggctcccagg	2580

actccccggt	ttgggcactg	tgagtcagge	atgcctggaa	cctgcttcgt	ccccttagtc	2640
cacgccaggc	acagacccat	caacagacaa	tggctgcgtg	gagcagagag	gagagctggc	2700
tgacatctgc	gatgggacag	gggtgtgaaa	ggcttccaag	aggaggtgtc	agccaagctg	2760
aaacctgagg	gatcgtgcag	agccaggcac	gagaatgtag	caactagcta	gcacttactg	2820
agcacctact	gtgtgccggg	acttgtcggg	cctgcattat	ctcctcacag	tgaccctgtc	2880
catttagcaa	acaagaaatc	tcaggcacag	ggagtgtgag	tgacttgccc	agtggccgct	2940
aggaaggaga	gcatctggga	cttgaaccca	agccctcact	ccacctctag	acgttctctg	3000
tcccagtcgt	tggaagatgc	cgcccattcc	caagaagacc	tcttcttctg	cctggccaaa	3060
gagggcccag	gttcagggtca	actgaccagt	tctctccctg	cccagggacc	atcgctaacg	3120
acgactgtga	gctgtgtgtg	aacgttgctg	gtaccggctg	cctctgagat	agccctgggt	3180
accctgagcc	caccagggac	acctcgccct	tcagcccacc	accctggcag	gcttccatcc	3240
ccgtccatgc	tcaagatggg	tccctggcca	ccatggtcat	caccaccctt	ccagggcctg	3300
agcagctgga	tctggtacaa	agcaatcgga	catagagttg	gagggggagg	cccctgaggc	3360
agcccagctc	ctgaataaaag	attctacaac	acacgagtc	acgtgtcctt	tgttcatccc	3420
caggagccat	gggaggagct	tctggagaag	aagtgtggat	tgaggagaaa	gacgggacta	3480
aaaataccag	gcaggaattt	tcctgaagtt	ttcaaggccc	ggggagttga	ttgaacccca	3540
tcccgaatat	gagggagttg	aggctcggag	caggaatgag	gcatccagga	tcacagagct	3600

<210> 169

<211> 4622

<212> DNA

<213> Homo sapiens

<220>

<223> mitochondrial cytochrome c-1; cytochrome c1 subunit of
mitochondrial cytochrome bcl complex (CYC1)

<400> 169

gtcgactttt	agtttagatt	gtgccatctg	gctctagcca	atggagacag	gacacagtag	60
cagggacaag	ctgtgtgaag	gataaaaaata	gcttctctcc	tttattcagg	tgtgtctctca	120
ccatttttcc	atctgtgagg	agcaccctct	ctgcagaaag	taaaattgac	ttgctgagag	180
aactttttgt	cggaatgctg	atctttcctt	atggtaccag	ggaacaagcg	ttctgtttct	240
aaataaacat	tttacatata	acacagggtt	tctccatgtt	ggtcaggctg	gtctcaaact	300
cacgacctca	agtgatctgg	ggcctcccaa	agtgtctgga	ttacaggcgt	gagcaccgca	360
cccagcctag	tttttaaatt	ttatttgctt	tttttttttt	cttgagaggg	agtcttccgt	420
ctgtcatcca	ggctggagtg	cagtggcacg	atctctactc	actgcaacct	ccgcctcccg	480
ggttcaagcg	attctcctgc	ctcagcctcc	ccagagtagc	tgggactaca	ggcgcgcgcc	540
accagcctga	gctaattttt	gtatttttcag	tagagacaag	gtttcaccat	gctgaccagg	600
atggtctcca	tcttttgacc	tcgtgatctg	cccgcctcac	cctcccaaag	tgctgggatt	660
acagcgtgag	ccaccgcgcc	cggcctttgc	ttacttttta	aataatttta	aataaaaaata	720
ttctcacata	acaagatcat	atttacttac	ttttttgaga	cgaggctctg	ctcgatatcg	780
cccaggctgg	agtgcagtg	cgatctcggc	tcaccgcagt	ctccacctcc	ggggctcaag	840
cgatcctgcc	tcagcttccc	aaagcgctag	gacccaaggc	gcgcatacag	cgtcggggcca	900
tgagtcaagg	gaatgaagga	gaacaggggtg	ctcagcctgg	gggcccagcc	tcccgctggt	960
gcacgcgctg	cctgcggcgc	agacccctgc	ccgcaccctc	tgccgggctg	ccctccaagc	1020
cgccctttct	ctggagggtc	tcagcctgca	ggggcaccct	ccacccggcc	atcgcgagc	1080
ctgggaagg	ggagaaaagg	acgtcggggg	gtcggaggcg	gcgtgggaaa	cgccgggcgg	1140
agcgtggcgc	tgtcacggca	acagagagac	gcagcggggc	cccgcctcac	cgccagtttc	1200
cacgacaacc	cgaagagcgt	ggggagtcag	gcggtgcccc	ggccctgac	tgacgcgacc	1260
ggggccagcg	cgcttcgtcc	cgcgccaccc	gacaggcccc	gcccccgagc	ccggccccgc	1320
cccgcgctcc	ccggcttttc	cgaggttttg	actctcgtgg	cgccccaggg	gccgacggga	1380
gtggcgggcg	cgcgaggagg	gccaagatgg	cggcagctgc	ggcttcgctt	cgcggggtag	1440
tggtgggccc	gcggggcgcg	gggtccccgg	gcgcgcgtgc	ccgggggtctg	ctgtgcagcg	1500
cgcggcccg	gcagctcccc	ctacggacac	ctcaggtgag	cgctggggccg	ggccccggcc	1560
tccgcgcggc	cccgcatctc	cgtgaagggtc	acggcggggg	ggctgcgggc	gcgggccttg	1620
gcagcgcgga	agcggatccg	gccacccagc	gtccccggtc	ccagctgcct	gccgaccttg	1680
agctgggtgg	atcagggtcg	ggcgcccacc	tctccgaacg	gcagagagcc	cgtccccagc	1740
gtgggggttg	gcgggacggg	ctagctgcgc	tggcggggct	ggggctttcc	cgaatggcgc	1800
gcccaggacg	gctcttgccg	ctggtgtgcc	aaactggggc	cgcgtcctga	agtgacccca	1860
gcctgatctc	gccagtgcct	gtgaccttgg	cctgtcccag	cacccttggt	cacttcggtc	1920

tgatccccgg	ctcaggatcc	aggaacaccc	tctcctgaga	gcgaatcacg	gtctaggggt	1980
cagcggcgga	gagggatggg	gtgggtagtg	ggacaggggtg	tgcgtctggg	gccctgcagg	2040
aggaggccat	tgctgggtgg	agaggtgggc	gctgagagtc	agatccccag	gtagggctgg	2100
gtggtgtcct	ggcaagcgct	gagcggagat	cttgacaggca	gtggccttgt	cgtcgaagtc	2160
tggcctttcc	cgaggccgga	aagtgatgct	gtcagcgtcg	ggcatgctgg	cggcaggggg	2220
tgcggggctg	gccgtggctc	tgcattcggc	tgtgagtgcc	agtgacctgg	agctgcaccc	2280
ccccagctat	ccgtgggtctc	accgtggcct	cctctcttcc	ttggaccaca	ccaggtgtgc	2340
agctggctgg	ctggctggca	gcgggaggtt	ctgggtggag	ctggtaaggt	ggaatcttca	2400
gctttcctaa	ccctttccct	ccctccagca	tccggagggg	tttccaggta	tataagcagg	2460
tgtgcgcctc	ctgccacagc	atggacttcg	tggcctaccg	ccacctgggtg	ggcgtgtgct	2520
acacggagga	tgaagctaag	gagctggctg	cggaggtgtg	gggtctggga	tgcctgggac	2580
ccagggctca	gggctccac	tgttgagatg	gcagggttgt	gatgaggctc	tcgggtggcag	2640
gtggagggttc	aagacggccc	caatgaagat	ggggagatgt	tcatgcggcc	agggaaagctg	2700
ttcgactatt	tcccaaaaacc	atcccccaac	agtgaggctg	ctcgagctgc	caacaacgga	2760
gcattgcccc	ctgacctcag	ctacatcgctg	cgagctaggt	acacgggctg	cccctggggt	2820
gggtgctggag	agatggggga	agggctgact	tgtgcttggg	actaaggagc	catggatctg	2880
gtcctaggca	tgggtggtgag	gactacgtct	tctcctgtct	cacgggctac	tgcgagccac	2940
ccaccggggt	gtcactgcgg	gaaggtctct	acttcaaccc	ctactttcct	ggccaggcca	3000
ttgccatggc	ccctcccatc	tacacagatg	tcttagagtt	tgacgatggg	aagaggcctc	3060
cagtctccta	cccccaggga	tgctttccct	gtgttcctgg	gtccaggagg	tcctgcccac	3120
ttcttgtctg	gggcgtcttc	tgtgcatgtc	tcaggaggct	tttgggctcc	ttcagttttg	3180
cgtatgtccg	gtggagggtg	ctgccccctt	gatgccttgg	gtaggggcag	tgtctgcttc	3240
acagaggggg	ggcatgatcc	caggttggtg	atgagcctga	gaatagccct	cactgcttgt	3300
cgttggccag	gcaccccagc	taccatgtcc	cagatagcca	aggatgtgtg	caccttccctg	3360
cgttggccat	ctgagccaga	gcacgacctt	cgaaaacgca	tggggctcaa	ggtaaaaggg	3420
ttgggaggcc	atggtgggta	tcagagaagg	gctgggagct	gggcagggct	cctcccactc	3480
ccttctctga	gccttccttg	tctgcagatg	ttgatgatga	tggctctgct	ggtgcccctg	3540
gtctacacca	taaagcggca	caagtgggtc	gtcctgaaga	gtcggaagct	ggcatatcgg	3600
ccgcccaggt	gaccctgtcc	agtgtctgct	tgccatcctg	ccagaacagg	ccctcaagcc	3660
caagagccat	cccaggcctg	ttcaggcctc	agctaagcct	ctcttcatct	ggaagaagag	3720
gcaagggggc	aggagaccag	gctctagctc	tgggccctcc	ttcagccccc	atcatgggaa	3780
taaattaatt	ttctcaatgt	acataattga	gttattatat	ggagtgcagg	tttgcaagga	3840
actctgatac	caagaccctt	gccttcacaa	ggctcccagg	atgtcccatg	tcccatgcag	3900
tgtggccagc	aatgccttgc	actgactggt	agctgggaag	tccagacagt	gggtgtggga	3960
cagaaagcgg	agaactgcat	gttagaggaa	gtcagcattt	gggtgggtgg	ggtgtgtctg	4020
agcacagagc	tgaaaagggc	ctagccaggc	aggatgtggc	ccagggaacct	gttggaatga	4080
acagccaagt	gttaaggtgt	tgaaccactt	ggccccatt	ctgatggcag	ggaaccttgc	4140
tcattttaac	agggaaagcc	tgtctagggc	aggggctatt	tattctgggt	tcgggctgag	4200
gaaggggatg	gctcccagcc	aggtgaagga	gtcaagtaga	cagacaggat	gtgtgtcatg	4260
gagtgaagg	tggccccctc	tagcagtcca	cagggtagct	aggtggtggg	tcctggccag	4320
aagctggagt	agctgggttc	ccacaggagc	atgctgtctga	gggagggaga	cagtggatgc	4380
tatctaggag	ggtcacagag	acatgaccca	gcaccggccc	agtgacctgg	tgcaggactc	4440
actcctgagc	ttccctcgtc	cctaggaagg	gaaggaaaac	acccattttc	attgtctggtg	4500
tcctagctgc	aggagctgag	gggagtgggtg	gccatagtcc	aaggaaggca	agagctgaat	4560
gggagaaaag	tggtaccaat	aggcctgcag	gcaaagagag	gtgcaggcct	gggggaccag	4620
gg						4622

<210> 170
 <211> 423
 <212> DNA
 <213> Homo sapiens

<220>
 <223> COX17 homolog; cytochrome c oxidase assembly protein
 (yeast) homolog; mitochondrial copper recruitment homolog;
 copper metallochaperone homolog

<400> 170
 ccggaagtga ctgcggacga atcggcggtt gccgaggctg gcatagattt ggctgtctcc 60
 gctcatagct gcttttggcg cgaaagatgc cgggtctggt tgactcaaac cctgccccgc 120
 ctgagtctca ggagaagaag ccgctgaagc cctgctgcgc ttgcccgag accaagaagg 180

```

cgcgcgatgc gtgtatcatc gagaaaggag aagaacactg tggacatcta attgaggccc 240
acaaggaatg catgagagcc ctaggattta aaatatgaaa tgggtggtctg ctgtgtgaat 300
aaataattcc tgaagaatga agaagattaa ttttgggagt tctttgacga actttgatat 360
gtggaaaaag tatttataat ttattgtaag aagaaagtaa aatattacta gtggaagatc 420
ttc
423

```

```

<210> 171
<211> 2218
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> estrogen receptor-related protein (hERRa1); estrogen-related
      receptor (hERR1, ERR1, ERR alpha); estrogen receptor-like 1
      (ESRL1); ESRRA, ESR; NR3B1

```

```

<400> 171
tcctacaagc agccggcggc gccgccgagt gaggggacgc ggcgcggtgg ggcggcgcg 60
cccgaggagg cggcgaggga ggggccgccc gcgggccccg gctcactccg gcactccggg 120
ccgctcggcc cccatgcctg cccgaccgcg ctgccggagc cccagggtgac cagcgccatg 180
tccagccagg tgggtgggcat tgagcctctc tacatcaagg cagagccggc cagccctgac 240
agtccaaaag gttcctcgga gacagagacc gagcctcctg tggccctggc ccctgggtcca 300
gctcccactc gctgcctccc aggccacaag gaagaggagg atggggaggg ggctgggcct 360
ggcgagcagg gcggtgggaa gctggtgctc agctccctgc ccaagcgctc ctgcaaagcc 420
tgtggggacg tggcctccgg ctaccactat ggtgtggcat cctgtgaggg ctgcaaagcc 480
ttcttcaaga ggaccatcca ggggagcatc gagtacagct gtccggcctc caacgagtgt 540
gagatcacca agcggagacg caaggcctgc caggcctgcc gcttcaccaa gtgcctgcgg 600
gtgggcatgc tcaaggaggg agtgcgcctg gaccgcgtcc ggggtgggag gcagaagtac 660
aagcggcggc cggagggtga cccactgccc ttcccggggc ccttcacctg tgggcccctg 720
gcagtgcctg gagggccccg gaagacagcc ccagtgaatg cactgggtgtc tcatctgctg 780
gtggttgagc ctgagaagct ctatgccatg cctgaccccg caggccctga tgggcacctc 840
ccagccgtgg ctaccctctg tgacctcttt gaccgagaga ttgtggtcac catcagctgg 900
gccaaagagc tcccaggctt ctcatcgctg tcgctgtctg accagatgtc agtactgcag 960
agcgtgtgga tggagggtgt ggtgctgggt gtggcccagc gctcactgcc actgcaggat 1020
gagctggcct tcgctgagga cttagtctct gatgaagagg gggcacgggc agctggcctg 1080
ggggaaactg gggctgccct gctgcaacta gtgcggcggc tgcaggccct gcggctggag 1140
cgagaggagt atgttctact aaaggccttg gcccttgcca attcagactc tgtgcacatc 1200
gaagatgccg aggtgtgga gcagctgcga gaagctctgc acgaggccct gctggagtat 1260
gaagccggcc gggctggccc cggagggggg gctgagcggc ggcggggcggg caggctgctg 1320
ctcacgctac cgctcctccg ccagacagcg ggcaaagtgc tggcccattt ctatggggtg 1380
aagctggagg gcaagggtgc catgcacaag ctgttcttgg agatgctcga ggccatgatg 1440
gactgaggca aggggtggga ctggtggggg ttctggcagg acctgcctag catggggtca 1500
gccccaaagg ctggggcgga gctgggggtc gggcagtgcc acagcctgct ggcagggcca 1560
gggcaatgcc atcagcccct gggaacaggc cccacgccct ctctccccc tcctaggggg 1620
tgtcagaagc tgggaacgtg tgtccaggct ctgggcacag tgctgcccct tgcaagccat 1680
aacgtgcccc cagagtgtag ggggccttgc ggaagccata gggggctgca cgggatgcgt 1740
gggaggcaga aacctatctc agggagggaa ggggatggag gccagagtct cccagtgggt 1800
gatgcttttg ctgctgctta atcctacccc ctcttcaaaag cagagtggga cttgggagagc 1860
aaaggcccat gcccccctcg ctctctctct catcatttgc attgggcatt agtgtcccc 1920
cttgaagcaa taactccaag cagactccag cccctggacc cctgggggtg ccagggttc 1980
cccatcagct cccaacgagc ctctcaggg ggtaggagag cactgcctct atgccctgca 2040
gagcaataac actatatatta tttttgggtt tggccaggga ggcgcaggga catggggcaa 2100
gccaggggcc agagcccttg gctgtacaga gactctattt taatgtatat ttgctgcaaa 2160
gagaaaccgc ttttggtttt aaacctttta tgagaaaaaa atatataata ccgagctc 2218

```

```

<210> 172
<211> 5749
<212> DNA
<213> Homo sapiens

```


<220>

<223> mineralocorticoid receptor (MLR, hMR, MCR); aldosterone
receptor; nuclear receptor subfamily 3, group C, member 2
(NR3C2)

<400> 172

```
cgcgaggagcc aacttcaggg tgctcagagg aagcccgtgc agtcagtcac ctgggtgcaa 60
gagcggttgct gcctcgggct ctcccgtgc agggagagcg gcactcgctg gcctggatgt 120
ggttggattt aggggggctc cgcagcaggg gtttcgtggc ggtggcaagc gctgcaacag 180
gtagacggcg agagacggac cccggccgag gcagggatgg agaccaaagg ctaccacagt 240
ctccctgaag gtctagatat ggaaagacgg tggggtaaac tttctcaggg tgtggagcgt 300
tcttccctgg gacctacaga gaggaccgat gagaataact acatggagat tgtcaacgta 360
agctgtgttt ccggtgctat tccaaacaac agtactcaag gaagcagcaa agaaaaacaa 420
gaactactcc cttgccttca gcaagacaat aatcggcctg ggattttaac atctgatatt 480
aaaactgagc tggaaactaa ggaactttca gcaactgtag ctgagtcctat gggtttatat 540
atggattctg taagagatgc tgactattcc tatgagcagc agaaccaaca aggaagcatg 600
agtccagcta agatttatca gaatgttgaa cagctgggtg aattttacaa aggaaatggc 660
catcgtcctt ccactctaag ttgtgtgaac acgccttga gatcatttat gtctgactct 720
gggagctccg tgaatgggtg cgtcatgcgc gccattgtta aaagccctat catgtgtcat 780
gagaaaagcc cgtctgtttg cagccctctg aacatgacat ctccggtttg cagccctgct 840
ggaatcaact ctgtgtcctc caccacagcc agctttggca gttttccagt gcacagccca 900
atcaccaggg gaactcctct gacatgctcc cctaactgtc aaaatcgagg ctccaggctc 960
cacagccctg cacatgctag caatgtgggc tctcctctct caagtccgtt aagtagcatg 1020
aaatcctcaa tttccagccc tccaagtcac tgcagtgtaa aatctccagt ctccagctcc 1080
aataatgtca ctctgagatc ctctgtgtct agccctgcaa atattaacaa ctcaagggtc 1140
tctgtttcca gcccttcgaa cactaataac agatccacgc tttccagtcg ggcagccagt 1200
actgtgggat ctatctgtag cctgttaaac aatgccttca gctacactgc ttctggcacc 1260
tctgtgggat ccagtacatt gcgggatgtg gttcccagtc cagacacgca ggagaaaggt 1320
gctcaagagg tcccttttcc taagactgag gaagtagaga gtgccatctc aaatgggtgtg 1380
actggccagc ttaatatgtt ccagtacata aaaccagaac cagatggagc ttttagcagc 1440
tcatgtctag gaggaaatag caaaataaat tcggattctt cattctcagt accaataaag 1500
caagaatcaa ccaagcattc atgttcaggg accctcttta aagggaaatcc aacagtaaac 1560
ccgtttccat ttatggatgg ctctgtattt tcctttatgg atgataaaga ctattattcc 1620
ctatcaggaa ttttaggacc acctgtgccc ggctttgatg gtaactgtga aggcagcgga 1680
ttcccagtg gtattaaaca agaaccagat gacgggagct attaccaga ggccagcatc 1740
ccttcctctg ctattgttgg ggtgaattca ggtggacagt ccttccacta caggattggg 1800
gctcaaggta caatatcttt atcacgatcg gctagagacc aatctttcca acacctgagt 1860
tcctttcctc ctgtcaatac ttttagtgag tcatggaaat cacacggcga cctgtcgtct 1920
agaagaagt atgggtatcc ggtcttagaa tacattccag aaaatgtatc aagctctact 1980
ttacgaagt tttctactg atcttcaaga ccttcaaaaa tatgtttggg gtgtggggat 2040
gaggcttcag gatgccatta tggggtagtc acctgtggca gctgcaaagt tttcttcaaa 2100
agagcagtg aagggcaaca caactattta tgtgctggaa gaaatgattg catcatgat 2160
aagattcgac gaaagaattg tcctgcttgc agacttcaga aatgtcttca agctggaatg 2220
aatttaggag cacgaaagtc aaagaagttg ggaaagttaa aagggattca cgaggagcag 2280
ccacagcagc agcagccccc acccccaccc ccaccccgcc aaagcccaga ggaagggaca 2340
acgtacatcg ctctgcaaaa agaaccctcg gtcaacacag cactgggtcc tcagctctcc 2400
acaatctcac gagcgctcac accttccccc gttatgggtc ttgaaaacat tgaacctgaa 2460
attgtatatg caggctatga cagctcaaaa ccagatacag ccgaaaatct gctctccacg 2520
ctcaaccgct tagcaggcaa acagatgatc caagtcgtga agtgggcaaa ggtacttcca 2580
ggatttaaaa acttgctctc tgaggacca attaccctaa tccagtatcc ttggatgtgt 2640
ctatcatcat ttgccttgag ctggagatcg taaaaacata cgaacagcca atttctctat 2700
tttgaccag acctagtctt taatgaagag aagatgcac agtctgcat gtatgaacta 2760
tgccagggga tgcacaaat cagccttcag ttcgttcgac tgcagctcac ctttgaagaa 2820
tacaccatca tgaaagtttt gctgctacta agcacaattc caaaggatgg cctcaaaagc 2880
caggctgcat ttgaagaaat gaggacaaat tacatcaaag aactgaggaa gatggtaact 2940
aagtgtccca acaattctgg gcagagctgg cagaggttct accaactgac caagctgctg 3000
gactccatgc atgacctggg gagcgacctg ctggaattct gcttctacac cttccgagag 3060
tcccctgcgc tgaagggtaga gttccccgca atgctgtgtg agatcatcag cgaccagctg 3120
cccaaggtgg agtcgggga cgccaagccg ctctacttcc accggaagtg actgcccgtc 3180
gccagaaga actttgcctt aagtttccct gtgtgtgtcc acaccagaa ggaccgaaga 3240
aaacctgttt ttaacatgtg atggttgatt cacacttgtt caacagtttc tcaagtttaa 3300
```

agtcattgtca	gaggttttga	gccgggaaag	ctgtttttcc	gtggatttgg	cgagaccaga	3360
gcagtctgaa	ggattcccca	cctccaatcc	cccagcgctt	agaaacatgt	tcctgttccct	3420
cgggatgaaa	agccatatct	agtcaataac	tctgattttg	atattttcac	agatggaaga	3480
agttttaact	atgccgtgta	gtttctggta	tcgttcgctt	gttttaaaag	ggttcaagga	3540
ctaacgaacg	ttttaaaagct	tacccttggt	ttgcacataa	aacgtatagt	caatatgggg	3600
cattaatatt	cttttgttat	taaaaaaaca	caaaaaaata	ataaaaaaat	atatacagat	3660
tcctgtttgt	taataacaga	actcgtggcg	tggggcagca	gctgcctctg	agccctcgct	3720
cgtccacggg	cttctgcac	actggtatac	acactcggtt	gcgtccattt	cttattttaat	3780
tagaatggat	aagatgatgt	taaatgcctt	ggtttgattt	ctagtatcta	ttgtgttggc	3840
tttacaata	attttttgca	gtcttttgct	gtgctgtaca	ttactgtatg	tataaattat	3900
gaaggacctg	aaataaggta	taaggatcct	ttgtaaatga	gacacatata	aaaaaaatct	3960
ttaatgggta	ataggatgaa	tgggaaagta	tttttgaaag	aattctattt	tgctggagac	4020
tatttaagta	ctatctttgt	ctaaacaagg	taattttttt	ttgtaaagtg	caatgtcctg	4080
catgcataat	gaaccgttta	cagtgtattt	aagaaaggga	aagctgtgcc	ttttttagct	4140
tcatatctaa	tttaccatta	ttttacagtc	tctgttgtaa	ataaccacac	tgaacacctc	4200
tcggttgtct	tgaaaccttt	ctactttttc	tgtacttttt	gttttgttct	tggtctcccg	4260
cttggggcat	ttgtgggact	ccagcacggt	ttctggcttc	tgttccatcc	tgctccatcg	4320
gggaatgaca	cactgcgggtg	tctgcagctc	ctggaagggtg	tcatttgaca	acacatgtgg	4380
gagaggaggt	ccttgagggtg	ctgcagcttt	gggaaagcct	gcctcgtttc	ccttttccctc	4440
tagaagcaga	accagctcta	cgagagtggg	actgggaact	tgatggctca	gagagcatct	4500
tttctctcca	ttttagaaaa	tcagattttc	tcctgtggga	aaaaaaaatt	ccatgcactc	4560
ttctctctgt	aaagatcagc	tattcccttc	tgatcttgga	aagaggttct	gcactcctgg	4620
aaccggtcac	aggaacgcac	agatcatggc	aggatgcgct	gggacggccc	atcttggcaa	4680
ggttcagtct	gaatggcatg	gagaccggga	gatagagggg	ttttagattt	ttaaaaggtg	4740
ggttttaaaa	ataagtttta	tacataaaca	gttttgagga	aaaattacag	atcatataag	4800
caagacagtg	gcactaaaat	gtttaattca	ttaatctgtt	tgtttggcac	tgatgcaatg	4860
tatggctttt	ctcttgcccc	aaatcacaaa	catatgtatc	tttggggaaa	ctaacaatat	4920
gattgcacta	aataaaactac	tttgaataga	ggccaaatta	atctttttaa	aatgatgata	4980
atcatcaggt	ttactcagtg	aaatcatatt	aattattttc	caaaatctaa	aagctgtagc	5040
tggaagagcc	catggccacg	aggaagcagc	aattaattag	atcaacactt	ttctccaggg	5100
ttcaccatgc	aggcaacatt	accttgtctt	tcaaaagaca	cctgccttag	tgcaagggga	5160
aacctgtgaa	agctgcactc	agagggagga	gtctttctta	cataatttgc	aatttcagga	5220
atttaattta	taggcagatc	tttaaataca	gtcaacttac	ggtgcacagt	aatatgaaag	5280
ccacactttg	aaggtaataa	atacacagca	tgcagactgg	gagttgctag	caaacaaatg	5340
gcttacttac	aaaagcagct	tttagttcag	acttagtttt	tataaaatga	gaattctgac	5400
ttacttaacc	aggtttggga	tggagatggg	ctgcatcagc	tttttgtatt	aacaaagtta	5460
ctggctcttt	gtgtgtctcc	aggtaacttt	gcttgattaa	acagcaaagc	catattctaa	5520
attcactggt	gaatgcctgt	cccagtccaa	attgtctgtc	tgctcttatt	tttgtaccat	5580
tatgctctta	aaaatcttgg	tttggtacag	ttcataattc	acaaaaaagt	tcatataatt	5640
taaagaaaaca	ctaaattagt	ttaaaatgaa	gcaatttata	tctttatgca	aaaacatatg	5700
tctgtctttg	caaaggactg	taagcagatt	acaataaatc	ctttactttt		5749

<210> 173

<211> 769

<212> DNA

<213> Homo sapiens

<220>

<223> plasma membrane Ca²⁺ pump isoform 1a (alternatively spliced) (hPMCA1a, PMCA1), ATPase, Ca⁺⁺ transporting, plasma membrane 1 (ATP2B1)

<400> 173

caaaattcct	caaagaagct	ggtcatggaa	cacaaaagga	agaaatacct	gaggaggaat	60
tagcagagga	tggtgaagag	attgatcacg	ctgaaaggga	gttgcggcgt	ggccaaatct	120
tgtggtttag	aggtctgaac	agaatccaaa	cacagatgga	tgtagtgaat	gctttccaga	180
gtggaagtcc	cattcagggg	gctctaaggc	ggcaaccctc	catcgccagc	cagcatcatg	240
atgtaacaaa	tatttctacc	cctacacatt	tagtgttttc	ctcttctact	gcttctacta	300
ctgtggggta	ttcagagtgt	gaatgcattt	cgtagttcct	tatatgaagg	gttagaaaaa	360
ccggaatcaa	gaagtctgat	tcacaacttt	atgacacatc	ctgagtttag	gatagaagat	420
tcagagcctc	atatccccct	tattgatgac	actgatgccg	aagatgatgc	tcctacaaaa	480

cgtaactcca	gtcctccacc	ctctcccaac	aaaaataaca	atgctgttga	cagtgggaatt	540
caccttataa	tagaaatgaa	caagtctgct	acctcttcat	ccccaggaag	cccactacat	600
agtttggaaa	catcactctg	attgtaagct	gaatgttaac	acactagctg	cattgttaaag	660
aaacaaattg	aaactgggtc	ttttcacata	ttgtgatgga	caagctagta	ttcttgtctt	720
tggacttcaa	cagaagacac	acttgtacga	atgtagattt	atttttttg		769

<210> 174

<211> 2823

<212> DNA

<213> Homo sapiens

<220>

<223> ATPase, H⁺ transporting, lysosomal (vacuolar proton pump)
subunit 1 (ATP6S1); Xq terminal portion ORF

<400> 174

cctcaggaag	ctgacattct	tgtgaggggtg	gccagtaa	actaagtcg	tataggatat	60
gatgtcagtg	ttacggcctt	tagggaagga	agcaggctaa	ggggacagag	tgactgggat	120
gctattttag	ataaggggtg	tcaggccagg	cctcattgag	gaggtgatat	atgagcagcg	180
atcttaattg	agggagggag	ccgtttgggg	aaggacattc	ctggaacagc	aaatgcgagg	240
gtcctggg	aggtgtgctc	ttggccagct	caaggaagag	ctgggtgtgg	tggagcacag	300
tgagttagag	aaaggggtag	gagatgtagg	agatgggttg	caggtggcta	ggcgatgaag	360
taggaccttg	tagcccatga	gggggaaggt	cagttgcagt	tcgaaatgtg	tgagaaagcc	420
ttgggtaacg	tggagcaggg	agtgggtgtg	tttctcaatt	aaagaaagcc	cacaggaccc	480
accagcagtt	cctgggcttt	ccgactgaga	accccggtgg	ccaaacagca	gcaaggctct	540
gccacaagg	gaggggaggg	tggg	cgagtg	tgtataccaa	acagggttagg	600
aaaatctcct	cagggcctaa	ctgggaaggg	ccagaggaag	ctggggatgg	gagtggaggg	660
taggagcaaa	aggacaaagg	acatctgtag	gttgtggaga	aaaagggatg	gggtcggggc	720
cactgtggtc	ctaagagctc	aaaagacttc	aatgctcgat	gcttcctcca	gcatgttctg	780
agatcctcac	ctctccctt	ccgccaaaag	caggtggggg	gaggggtccc	tccagactgg	840
acatagccga	ctctcctttt	ctctggctgg	gagggcctgc	acaaatgctc	ttggctgccc	900
cacccctcc	ccgcagcttc	cctgttccct	ccccagttcc	tcttgtctgt	aggggtggca	960
aggcggtga	ctcctactcc	tgagttacca	caagtcagct	gcctgcagat	ctccccaccc	1020
catgactgcc	ttccatgtct	tctcaccctg	ccctgagagt	gctggaggga	agagctgagc	1080
attgaggatt	tcacagcata	tggcggtgtg	tttgaaaca	agcaggacag	cgcttttct	1140
aacctagaga	atgccctgga	cctggcccc	tcctcactgg	tgcttcctgc	cgctgactgg	1200
tatgcagtca	gcactctgac	cacttacctg	caggagaagc	tcggggccag	ccccttgcat	1260
gtggacctgg	ccacctg	ggagctgaag	ctcaatgcca	gcctccctgc	tctgctgctc	1320
attgcctgc	cctacacagc	cagctctggt	ctgatggcac	ccaggggaagt	cctcacaggc	1380
aacgatgag	tcctcgggca	ggctctgagc	acactcaagt	ccgaagatgt	cccatacaca	1440
gcggccctca	cagcggtccg	cccttccagg	gtggccctg	atgtagccgt	gggtggccgga	1500
gggctaggtc	gccagctgct	acaaaaacag	ccagtatcac	ctgtgatcca	tcctcctgtg	1560
agttacaatg	acaccgctcc	ccggatcctg	ttctgggccc	aaaacttctc	tgtggcgctac	1620
aaggaccagt	gggaggacct	gactccctc	acctttgggg	tgcaggaact	caacctgact	1680
ggctccttct	ggaatgactc	ctttgccagg	ctctcactga	cctatgaacg	actctttggt	1740
accacagtga	cattcaagtt	cattctggcc	aaccgcctct	acccagtgtc	tgcccggcac	1800
tggtttacca	tggagcgctt	cgaagtccac	agcaatggct	ccgtcgccca	cttcaatgct	1860
tcccaggtca	cagggcccag	catctactcc	ttccactg	agtatgtcag	cagcctgagc	1920
aagaagggtg	gtctcctcgt	ggcccgacag	cagccctctc	cctggcagat	gatgcttcag	1980
gaactccaga	tccaggcttt	caacgtaaat	ggggagcagt	tctcctacgc	cagcgactgt	2040
gccagcttct	tctcccccg	catctggatg	gggctgctca	cctccctggt	catgctcttc	2100
atcttcacct	atggcctgca	catgatcctc	agcctcaaga	ccatggatcg	ctttgatgac	2160
cacaagggcc	ccactatttc	tttgacccag	attgtgtgac	cctgtgccag	tgggggggtt	2220
gaggtgggga	cggtgtccgt	gttgttgctt	tcccaccctg	cagcgactg	gactgaagag	2280
cttccctctt	cctactgcag	catgaactgc	aagctccct	cagcccatct	tgtccctct	2340
tcagcccgt	gaggagcttt	cttgggctgc	ccccatctct	cccaacaagg	tgtacatatt	2400
ctgcgtagat	gctagaccaa	ccagcttccc	agggttcgtc	gctgtgaggc	gtaagggaca	2460
tgaattctag	ggtctccttt	ctccttattt	attcttgtgg	ctacatcatc	cctggctgtg	2520
gatagtgttt	ttgtgtagca	aatgctccct	ccttaagggt	atagggctcc	ctgagtttgg	2580
gagtgtggaa	gtactactta	actgtctgtc	ctgcttggct	gtcgttatcg	ttttctgggt	2640
atgttgtgct	aacaataagc	agtacacggg	tttatttctg	tggcctgaga	aggaagggac	2700

ctccacgaca ggtgggctgg gtgcgatcgc cggtctgtttg gcatgttccc accgggagtg 2760
 ccgggcagga gcatgggggtg cttgggtgtt tccttcctaa taaaataaac gcgggtcgcc 2820
 atg 2823

<210> 175
 <211> 3220
 <212> DNA
 <213> Homo sapiens

<220>
 <223> solute carrier family 20 (phosphate transporter) member 1
 (SLC20A1, PIT1, PiT-1); gibbon ape leukemia virus receptor 1
 (GLVR1); phosphate transporter/retroviral receptor

<400> 175
 gagctgtccc cggtgccgcc gaccgcgggcc gtgcgctgtg ccggtggctc cagccgctgc 60
 cgctcgcgac tcctcgtctc ccgctccgcc ctcccttttc cctggatgaa cttgcgtcct 120
 ttctcttctc cgccatggaa ttctgctccg tgcttttagc cctcctgagc caaagaaacc 180
 ccagacaaca gatgcccata cgcagcgtat agcagtaact ccccgctcg gtttctgtgc 240
 cgtagtttac agtatttaaat tttatataat atatattatt tattatagca tttttgatac 300
 ctcatattct gtttacacat cttgaaaggc gctcagtagt tctcttacta aacaaccact 360
 actccagaga atggcaacgc tgattaccag tactacagct gctaccgccg cttctgggtcc 420
 tttggtggac tacctatgga tgctcatcct gggcttcatt attgcatttg tcttggcatt 480
 ctccgtggga gccaatgatg tagcaaattc ttttggtaga gctgtgggct caggtgtagt 540
 gaccctgaag caagcctgca tcctagctag catctttgaa acagtgggct ctgtcttact 600
 gggggccaaa gtgagcgaaa ccctccggaa gggcttgatt gacgtggaga tgtacaactc 660
 gactcaaggg ctactgatgg ccggtcagc cagtgcctatg tttggttctg ctgtgtggca 720
 actcgtggct tcgtttttga agctccctat ttctggaacc cattgtattg ttggtgcaac 780
 tattggtttc tcctcgtggg caaaggggca ggagggtgtc aagtgggtctg aactgataaa 840
 aattgtgatg tcttggttcg tgtccccact gctttctgga attatgtctg gaattttatt 900
 ctctcgtggt cgtgcattca tcctccataa aataaacctc tttccatca tgtatactgg 960
 tttgccagtt ttctatgcct gcacagttgg gcacaaacct tctgtggggt accatcctca tctcgtggg 1020
 agcaccgttg ctgggctttg acaaaacttc tctgtggggt accatcctca tctcgtggg 1080
 atgtgcagtt ttctgtgccc ttatcgtctg gttctttgta tgtcccagga tgaagagaaa 1140
 aattgaacga gaaataaagt gtagtccttc tgaaagcccc ttaatggaaa aaaagaatag 1200
 cttgaaagaa gaccatgaag aaacaaagtt gtctgttggt gatattgaaa acaagcatcc 1260
 tgtttctgag gtagggcctg ccactgtgcc cctccaggct gtggtggagg agagaacagt 1320
 ctcattcaaa cttggagatt tggaggaagc tcagagaga gagaggcttc ccagcgtgga 1380
 cttgaaagag gaaaccagca tagatagcac cgtgaatggg gcagtgcagt tgccaatgg 1440
 gaaccttgtc cagttcagtc aagccgtcag caaccaaata aactccagtg gccactccca 1500
 gtatcacacc gtgcataagg attccggcct gtacaaagag ctactccata aattacatct 1560
 tgccaagggt ggagattgca tgggagactc ccgtgacaaa cccttaaggc gcaataatag 1620
 ctatacttcc tataccatgg caatatgtgg catgcctctg gattcattcc gtgccaaga 1680
 aggtgaacag aagggcgaag aaatggagaa gctgacatgg cctaattgcag actccaagaa 1740
 gcgaattcga atggacagtt acaccagtta ctgcaatgct gtgtctgacc ttcactcagc 1800
 atctgagata gacatgagtg tcaaggcagc gatgggtcta ggtgacagaa aaggaagtaa 1860
 tggctctcta gaagaatggg atgaccagga taagcctgaa gtctctctcc tcttccagtt 1920
 cctgcagatc cttacagcct gctttgggtc attcgcccat ggtggcaatg acgtaagcaa 1980
 tgccattggg cctctggttg ctttatattt ggtttatgac acaggagatg tttcttcaa 2040
 agtggcaaca ccaatatggc ttctactcta tgggtgtgtt ggtatctgtg ttggtctgtg 2100
 ggtttgggga agaagagtta tcagaccat ggggaaggat ctgacaccga tcacaccctc 2160
 tagtggtctc agtattgaac tggcatctgc cctcactgtg gtgattgcat caaatattgg 2220
 ccttcccctc agtacaacac attgtaaagt gggctctgtt gtgtctgttg gctgggtccg 2280
 gtccaagaag gctgttgact ggcgtctctt tcgtaacatt tttatggcct ggtttgtcac 2340
 agtccccatt tctggagtta tcagtgtctc catcatggca atcttcagat atgtcatcct 2400
 cagaatgtga agctgtttga gattaaaatt tgtgtcaatg tttgggacca tcttaggtat 2460
 tctgtctccc ctgaagaatg attacagtgt taacagaaga ctgacaagag tctttttatt 2520
 tgggagcaga ggagggaagt gttactttgt ctataactgc ttttgtgcta aatatgaatt 2580
 gtctcaaaat tagctgtgta aaatagcccg ggttccactg gctcctgctg aggtcccctt 2640
 tccttctggg ctgtgaattc ctgtacatat ttctctactt tttgtatcag gcttcaattc 2700
 cattatgttt taatgttgtc tctgaagatg acttgtgatt tttttttctt ttttttaaac 2760

catgaagagc	cgtttgacag	agcatgctct	gcgttggttg	tttcaccagc	ttctgccctc	2820
acatgcacag	ggattttaaca	acaaaaatat	aactacaact	tcccttgtag	tctcttatat	2880
aagtagagtc	cttggtactc	tgccctcctg	tcagtagtgg	caggatctat	tggcatatct	2940
gggagcttct	tagagggatg	aggttctttg	aacacagtga	aaattttaat	tagtaacttt	3000
tttgcaagca	gtttattgac	tgttattgct	aagaagaagt	aagaaagaaa	aagcctgttg	3060
gcaatcttgg	ttatttcttt	aagatttctg	gcagtgtggg	atggatgaat	gaagtggat	3120
gtgaactttg	ggcaagttaa	atgggacagc	cttccatgtt	catttgtcta	cctcttaact	3180
gaataaaaaa	gcctacagtt	tttagaaaaa	acccgaattc			3220

<210> 176

<211> 2832

<212> DNA

<213> Homo sapiens

<220>

<223> solute carrier family 26 (sulfate transporter), member 2
(SLC26A2); diastrophic dysplasia (DTD), diastrophic dysplasia
sulfur transporter (DTDST); sulfate anion transporter 1;
D5S1708

<400> 176

aggaagctga	accatctatc	tccagaaatg	tcttcagaaa	gtaaagagca	acataacggt	60
tcacccagag	actcagctga	aggaaatgac	agttatccat	ctgggatcca	tctggaactt	120
caaagggaat	caagtactga	cttcaagcaa	tttgagacca	atgatcaatg	cagaccttat	180
cataggatcc	ttattgagcg	tcaagagaaa	tcagatacaa	acttcaagga	gtttgttatt	240
aaaaagctgc	agaagaattg	ccagtgcagt	ccagccaaag	ccaaaaatat	gatttttaggt	300
ttccttcctg	ttttgcagtg	gctcccaaaa	tacgacctaa	agaaaaacat	tttaggggat	360
gtgatgtcag	gcttgattgt	gggcatatta	ttggtgcccc	agtccattgc	ttattccctg	420
ctggctggcc	agaacctgt	ctatggtctg	tacacatctt	tttttgccag	catcatttat	480
tttctcttgg	gtacctcccg	tcacatctct	gtgggcattt	ttggagtact	gtgccttatg	540
attggtgaga	cagttgaccg	agaactacag	aaagctggct	atgacaatgc	ccatagtgtc	600
ccttccttag	gaatgggttc	aaatgggagc	acattattaa	atcatacatc	agacaggata	660
tgtgacaaaa	gttgctatgc	aattatgggt	ggcagcactg	taacctttat	agctggagtt	720
tatcaggtag	cgatgggctt	ctttcaagtg	ggttttgttt	ctgtctacct	ctcagatgcc	780
ttgctgagtg	gatttgtcac	tggtgcctcc	ttcactatct	ttacatctca	ggccaagtat	840
cttcttgggc	tcaaccttcc	tggactaat	ggtgtgggct	cactcatcac	tacctggata	900
catgtcttca	gaaacatcca	taagaccaat	ctctgtgatc	ttatcaccag	ccttttgtgc	960
cttttggttc	ttttgccaac	caaagaactc	aatgaacact	tcaaatacaa	gcttaaggca	1020
ccgattccta	ttgaacttgt	tgttggtgta	gcagccacat	tagcctctca	ttttggaaaa	1080
ctacatgaaa	attataattc	tagtatttgt	ggacatatct	ccactggggt	tatgccaccc	1140
aaagtaccag	aatggaacct	aattcctagt	gtggctgtag	atgcaatagc	tatttccatc	1200
attggttttg	ctatcactgt	atcactttct	gagatgtttg	ccaagaaaca	tggttacaca	1260
gtcaaagcaa	accaggaaat	gtatgccatt	ggcttttgta	atatcatccc	ttccttcttc	1320
cactgtttta	ctactagtgc	agctcttgca	aagacattgg	ttaaagaatc	aacaggctgc	1380
catactcagc	tttctggtgt	ggtaacagcc	ctggttcttt	tggttggtcct	cctagtaata	1440
gtcctcttgt	tctattccct	tcaaaaaagt	gtccttggtg	tgatcacaat	tgtaaatcta	1500
cggggagccc	ttcgtaaatt	tagggatctt	cccaaatgt	ggagtattag	tagaatggat	1560
acagttatct	ggtttgttac	tatgctgtcc	tctgcactgc	taagtactga	aataggccta	1620
cttggtgggg	tttggttttc	tatatattgt	gtcatcctcc	gcactcagaa	gccaaagagt	1680
tcactgcttg	gcttggtgga	agagtctgag	gtctttgaat	ctgtgtctgc	ttacaagaac	1740
cttcagacta	agccaggcat	caagattttc	cgctttgtag	ccccctctcta	ctacataaac	1800
aaagaatgct	ttaaatctgc	tttatacaaa	caaactgtca	acccaatctt	aataaagggtg	1860
gcttggaaga	aggcagcaaa	gagaaagatc	aaagaaaaag	tagtgactct	tggtggaatc	1920
caggatgaaa	tgtcagtgca	actttcccat	gatcccttgg	agctgcatac	tatagtgatt	1980
gactgcagtg	caattcaatt	tttagatata	gcagggatcc	acacactgaa	agaagtctgc	2040
agagattatg	aagccatttg	aatccagggt	ctgctggctc	agtgcaatcc	cactgtgagg	2100
gattccctaa	ccaacggaga	atattgcaaa	aaggaagaag	aaaaccttct	cttctatagt	2160
gtgtatgaag	cgatggcttt	tgcaagaagta	tctaaaaatc	agaaaggagt	atgtgttccc	2220
aatggctctga	gtcttagtag	tgattaaattg	agaaggtaga	tagaagaatg	tctagccaat	2280
aggttaaaaat	ttcaagtgtc	caacatttcc	cagttccaca	gtgggaaatt	ttgcacactt	2340
gaaatttttaa	ccaagtggct	agatattatt	cctcctttga	agctaattggc	atttgttatat	2400

acacactgca	gcagagcttg	tagctggaca	gagtcaaaaa	gaagaaaata	cggtttcagg	2460
ctttcttgca	gatatgaagt	attcttggaa	tgcaataagt	atgtattgaa	ctgtactgta	2520
aagtagctcc	aaaacttaat	tactctcctg	ttttaggggt	tatacatttg	gactgtgcat	2580
tctccaagag	atgaagcggg	gaagttggga	tttacattgg	aagtgtctga	gacttcttta	2640
tgtggctcag	tggagagagg	gaaagaatgt	tgcacctgct	ctagtaccat	aggccaagag	2700
gcttctggat	cacaaagtca	taactagaca	ggtttgttct	tgtagttttc	tatccccagt	2760
ctttgtcccc	cagatggcag	tagtttttag	taggaaagtg	ccattcctgt	ccttaaggca	2820
cagtctcatc	ag					2832

<210> 177

<211> 4646

<212> DNA

<213> Homo sapiens

<220>

<223> ATP-binding cassette subfamily B (MDR/TAP), member 1 (ABCB1, ABC20); P-glycoprotein (PGY1, P-GP, GP170); multidrug resistance (MDR1)

<400> 177

cctactctat	tcagatatct	tccagattcc	taaagattag	agatcatttc	tcattctcct	60
aggagtactc	acttcaggaa	gcaaccagat	aaaagagagg	tgcaacggaa	gccagaacat	120
tcctcctgga	aattcaacct	gtttcgaggt	ttctcgagga	atcagcattc	agtcaatccg	180
ggccgggagc	agtcattctg	ggtgaggctg	attggctggg	caggaaacagc	gccggggcgt	240
gggctgagca	cagcgcttcg	ctctctttgc	cacaggaagc	ctgagctcat	tcgagttagc	300
gctcttccaa	gctcaaagaa	gcagaggccg	ctgttcgttt	ccttttaggtc	tttccactaa	360
agtcggagta	tcttcttcca	agatttcacg	tcttggtggc	cgttccaagg	agcgcgagggt	420
cgggatggat	cttgaagggg	accgcaatgg	aggagcaaag	aagaagaact	tttttaaact	480
gaacaataaa	agtgaaaaag	ataagaagga	aaagaaacca	actgtcagtg	tattttcaat	540
gtttcgctat	tcaaattggc	ttgacaagtt	gtatatgggt	gtgggaactt	tggctgccat	600
catccatggg	gctggacttc	ctctcatgat	gtcaaacatc	actaatagaa	gtgatatcaa	660
tgcaaatgca	ggaaatttag	aagatctgat	agacatgacc	aggtatgcct	attattacag	720
tgatacaggg	ttcttcatga	atctggagga	agacatgacc	aggtatgcct	attattacag	780
tgggaattggt	gctgggggtg	tggttgctgc	ttacattcag	gtttcatttt	ggtgcctggc	840
agctggaaga	caaatacaca	aaattagaaa	acagtttttt	catgctataa	tgcgacagga	900
gataggctgg	tttgatgtgc	acgatgttgg	ggagcttaac	acccgactta	cagatgatgt	960
ctctaagatt	aatgaagtta	ttggtgacaa	aattggaatg	ttctttcagt	caatggcaac	1020
atttttcact	gggtttatag	taggattttac	acgtggttgg	aagctaacc	ttgtgatttt	1080
ggccatcagt	cctgttcttg	gactgtcagc	tgctgtctgg	gcaaagatac	tatcttcatt	1140
tactgataaa	gaactcttag	cgtatgcaaa	agctggagca	gtagctgaag	aggtccttggc	1200
agcaattaga	actgtgattg	catttggagg	acaaaagaaa	gaacttgaaa	ggtacaacaa	1260
aaatttagaa	gaagctaaaa	gaattggggt	aaagaaagct	attacagcca	atatttctat	1320
aggtgctgct	ttctgctgta	tctatgcata	ttatgctctg	gccttctggg	atgggaccac	1380
cttggctctc	tcaggggaat	attctatttg	acaagtactc	actgtattct	tttctgtatt	1440
aattggggct	tttagtggtg	gacaggcatc	tccaagcatt	gaagcatttg	caaagtcaag	1500
aggagcagct	tatgaaatct	tcaagataat	tgataataag	ccaagtattg	acagctattc	1560
gaagagtggg	cacaaaccag	ataatattaa	gggaaatttg	gaattcagaa	atgttcactt	1620
cagttaccca	tctcgaaaag	aagttaagat	cttgaagggc	ctgaacctga	aggtgcagag	1680
tgggcagacg	gtggccctgg	ttggaaacag	tggctgtggg	aagagcacia	cagtccagct	1740
gatgcagagg	ctctatgacc	ccacagaggg	gatggtcagt	gttgatggac	aggatattag	1800
gaccataaat	gtaaggtttc	tacgggaaat	cattgggtgtg	gtgagtcagg	aacctgtatt	1860
gtttgccacc	acgatagctg	aaaacattcg	ctatggccgt	gaaaatgtca	ccatgggatga	1920
gattgagaaa	gctgtcaagg	aagccaatgc	ctatgacttt	atcatgaaac	tgccatcataa	1980
atgtgacacc	ctgggttgag	agagaggggc	ccagttgagt	ggtgggcaga	agcagaggat	2040
cgccattgca	cgtgccctgg	ttcgcaacct	caagatcctc	ctgctggatg	aggccacgtc	2100
agccttggac	acagaaagcg	aagcagtggg	tcaggtggct	ctggataagg	ccagaaaagg	2160
tcggaccacc	attgtgatag	ctcatcgttt	gtctacagtt	cgtaatgctg	acgtcatcgc	2220
tggtttcgat	gtggagtgca	ttgtggagaa	aggaaatcat	gatgaactca	tgaaagagaa	2280
aggcatttac	ttcaaacttg	tcacaatgca	gacagcagga	aatgaagtgg	aattagaaaa	2340
tgcagctgat	gaatccaaaa	gtgaaattga	tgccttggaa	atgtcttcaa	atgattcaag	2400
atccagtcta	ataagaaaaa	gatcaactcg	taggagtgct	cgtggatcac	aagcccaaga	2460

cagaaagctt	agtaccaaag	aggctctgga	tgaaagtata	cctccagttt	ccttttggag	2520
gattatgaag	ctaaatttaa	ctgaatggcc	ttattttgtt	gttgggtgat	tttgtgcca	2580
tataaatgga	ggcctgcaac	cagcatttgc	aataatattt	tcaaagatta	taggggtttt	2640
tacaagaatt	gatgatcctg	aaacaaaacg	acagaatagt	aacttgtttt	cactattgtt	2700
tctagccctt	ggaattattt	cttttattac	atttttcctt	cagggtttca	catttggcaa	2760
agctggagag	atcctcacca	agcggctccg	atacatggtt	ttccgatcca	tgctcagaca	2820
ggatgtgagt	tggtttgatg	accctaaaaa	caccactgga	gcattgacta	ccaggctcgc	2880
caatgatgct	gctcaagtta	aaggggctat	aggttccagg	cttgctgtaa	ttaccagaa	2940
tatagcaa	cttgggacag	gaataattat	atccttcata	tatggttggc	aactaacact	3000
gttactctta	gcaattgtac	ccatcattgc	aatagcagga	gttgttgaaa	tgaaaatggt	3060
gtctggacaa	gcaactgaaa	ataagaaaga	actagaaggt	gctgggaaga	tcgctactga	3120
agcaatagaa	aacttccgaa	ccgttgtttc	tttgactcag	gagcagaagt	ttgaacatat	3180
gtatgctcag	agtttgacag	taccatacag	aaactctttg	aggaaagcac	acatcttttg	3240
aattacattt	tccttcaccc	aggcaatgat	gtatttttcc	tatgctggat	gtttccggtt	3300
tggagcctac	ttggtggcac	ataaactcat	gagctttgag	gatgttctgt	tagtattttc	3360
agctgttgct	tttggtgcca	tgcccggtgg	gcaagtcagt	tcatttgctc	ctgactatgc	3420
caaagccaaa	atatcagcag	cccacatcat	catgatcatt	gaaaaaacc	ctttgattga	3480
cagctacagc	acggaaggcc	taatgccgaa	cacattggaa	ggaaatgtca	catttgggtga	3540
agttgtattc	aactatccca	cccgaccgga	catcccagtg	cttcagggac	tgagcctgga	3600
ggtgaagaag	ggccagacgc	tggtctgtgt	gggcagcagt	ggctgtggga	agagcacagt	3660
ggtccagctc	ctggagcggt	tctacgaccc	cttggcaggg	aaagtgtctg	ttgatggcaa	3720
agaaataaag	cgactgaatg	ttcagtggct	ccgagcacac	ctgggcatcg	tgtcccagga	3780
gcccatacctg	tttgactgca	gcattgctga	gaactattgc	tatggagaca	acagccgggt	3840
ggtgtcacag	gaagagatcg	tgagggcagc	aaaggaggcc	aacatacatg	ccttcacga	3900
gtcactgcct	aataaatata	gcactaaagt	aggagacaaa	ggaactcagc	tctctggtgg	3960
ccagaaacaa	cgcattgcca	tagctcgtgc	ccttgttaga	cagcctcata	ttttgctttt	4020
ggatgaagcc	acgtcagctc	tggatacaga	aagtgaagaa	gttgtccaag	aagccctgga	4080
caaagccaga	gaaggccgca	cctgcattgt	gattgctcac	cgctgtcca	ccatccagaa	4140
tgcagactta	atagtgggtg	ttcagaatgg	cagagtcagg	gagcatggca	cgcatcagca	4200
gctgctggca	cagaaaggca	tctatttttc	aatggtcagt	gtccaggctg	gaacaaagcg	4260
ccagtgaact	ctgactgtat	gagatgttaa	atacttttta	atatttgttt	agatatgaca	4320
tttattcaaa	gttaaaagca	aacacttaca	gaattatgaa	gaggatctct	tttaacattt	4380
cctcagtcaa	gttcagagtc	ttcagagact	tcgtaattaa	aggaacagag	tgagagacat	4440
catcaagtgg	agagaaatca	tagtttaaac	tgcattataa	attttataac	agaattaaag	4500
tagattttta	aagataaaat	gtgtaatttt	gtttatatatt	tcccatttgg	actgtaactg	4560
actgccttgc	taaaagatta	tagaagtagc	aaaaagtatt	gaaatgtttg	cataaagtgt	4620
ctataataaa	actaaacttt	catgtg				4646

<210> 178

<211> 2904

<212> DNA

<213> Homo sapiens

<220>

<223> butyrophilin, subfamily 2, member A1, transcript variant 1
(BTN2A1, BTF1, BT2.1)

<400> 178

cgaccacgc	gtccgaacat	ggcgacctag	gagaaaggga	agaacaattt	tttctcctct	60
tttgggaagg	tttgcgtcta	gtagtgctg	tgccctggg	cagattggag	agaagaggga	120
cgactggaga	atcgctgaga	accagcggag	aaaagaaaaa	gcaacgttta	attctagaag	180
gcctcctgtc	cctgcctgct	ctgggtgctc	atggaatcag	ctgctgccct	gcacttctcc	240
cggccagcct	ccctcctcct	cctcctcctc	agcctgtgtg	cactgggtctc	agcccagttt	300
attgtcgtgg	ggccactga	tcccatcttg	gccacggttg	gagaaaacac	tacgttacgc	360
tgccatctgt	caccgagaa	aaatgctgag	gacatggagg	tgccgtgggt	ccggtctcag	420
ttctccccc	cagtgtttgt	gtataaagg	ggcagagaga	gaacagagga	gcagatggag	480
gagtaccgag	gaagaaccac	ctttgtgagc	aaagacatca	gcaggggcag	cgtggccctg	540
gtcatacaca	acatcacagc	ccaggaaaaa	ggcacctacc	gctgttactt	ccaagaaggc	600
aggctcctacg	atgaggccat	cctgcacctc	gtagtggcag	gactaggctc	taagcccctc	660
atttcaatga	ggggccatga	agacgggggc	atccgctgg	agtgcatatc	tagaggggtg	720
tacccaaagc	ccctcacagt	gtggaggggc	ccctacggtg	gggttgcgcc	tgccctgaaa	780

gagggtctcca	tgcttgatgc	agacggcctc	ttcatggtca	ccacggctgt	gatcatcaga	840
gacaagtctg	tgaggaacat	gtcctgctct	atcaacaaca	ccctgctcgg	ccagaagaaa	900
gaaagtgtca	tttttattcc	agaatccttt	atgccagtg	tgtctccctg	tgagtgggcc	960
ctgcctatca	ttgtgggttat	tctgatgata	ccatttgccg	tatgcatcta	ttggatcaac	1020
aaactccaaa	aggaaaaaaa	gattctgtca	ggggaaaagg	agtttgaacg	ggaaacaaga	1080
gaaattgctc	taaaggaact	ggagaaagaa	cgtgtgcaaa	aagaggaaga	acttcaagta	1140
aaagagaaac	ttcaagaaga	attgcatggg	agaagaacat	tcttacatgc	tgttgatgtg	1200
gtcctggatc	cagacaccgc	tcatcccgat	ctcttcctgt	cagaggaccg	gagaagtgtg	1260
agaaggtgcc	ccttcaggca	cctaggggag	agcgtgcctg	acaaccaga	gagattcgac	1320
agtcagcctt	gtgtcctagg	ccgggagagc	ttcgcttcag	ggaaacatta	ctgggaggtg	1380
gagggtggaaa	acgtgattga	gtggactgtg	gggggtctgta	gagacagtgt	tgagaggaaa	1440
ggggaggtcc	tgctgattcc	tcagaatggc	ttctggacct	tgagatgca	taaagggcaa	1500
taccgggccc	tgctctcccc	tgataggatt	ctccctttga	aggagtccct	ttgccgggtg	1560
ggcgtcttcc	tggtactatga	agctggagat	gtctccttct	acaacatgag	ggacagatcg	1620
cacatctaca	catgtccccg	ttcagccttt	tccgtgcctg	tgaggccctt	cttcaggttg	1680
gggtgtgagg	acagccccc	cttcactctgc	cctgcactca	caggagccaa	tggggtcacg	1740
gtgcctgaag	agggcctgac	acttcacaga	gtggggaccc	accagagcct	atagaatcaa	1800
ttccttggtc	tcacagccat	gtagacaagc	cctgggtcatc	tcagcagcca	ccgcacaaca	1860
cccttggtgg	aagacacgcc	ctcctccctt	ctgggtcacac	aagagaacat	cttcagctg	1920
cctctttcac	acccactaca	gacctcagcc	ccagttttct	cctcctcact	aggctgtgtt	1980
tttagtagtt	cctttgcttg	taactatggg	atgggatcca	ggcataggga	actagtgtgt	2040
acacagctcc	cagccaagaa	gaaagtgtga	gaagttgatg	ggcagcaaac	ctgctgttta	2100
acatcagggg	gaccacatta	agcccagtat	tccagttggc	accagaagat	atggacttgg	2160
aatgaggcct	acaggggttca	ccaggatgta	agaggagaga	ggaatccaca	ggaccaccag	2220
agaggagagg	gaaccagata	tgcatatcag	agatagagga	agtggaaacca	gagagctggg	2280
agggaccaag	gttgtaaggg	tggttaagtc	ccaccataac	agctaagggg	acctgggaga	2340
tgatggctca	tttccaccca	gccccaggat	ttccagagcg	cacatccaca	ggcctggacc	2400
tggtgatgaag	atgaatgaag	aacatggatg	cacgtggatg	tagtttggtg	caggtgtccc	2460
tgcatgtggc	aaggagtcag	tactcagtc	ctgagtgtgg	ctgaaatttg	aggtcctggc	2520
tgagccaagg	agtaatggac	cagatctacc	tcagtattca	agttcagtg	ggacaccagt	2580
ggcttcaaac	ttcctgggtt	catgatatct	tgagacgcct	tacaaatgat	ggaggattcc	2640
aaagagtttt	tgtttatattg	ggtttaatt	tgttggtatt	tatggcattt	gagattgaaa	2700
ctaagaaatg	ttttaatttta	ttacctttac	aacattttatt	tacattacat	acatacattt	2760
acaacatttta	tttaatttata	ttaaaatagc	atgaataagc	caattatagg	ttaatataag	2820
tagaatgttt	gtgaaaaata	agtatgggat	ccaaagcaaa	ataaatttta	ttgtgaagtg	2880
tgaaaaaaaa	aaaaaaaaaa	aaaa				2904

<210> 179

<211> 498

<212> DNA

<213> Homo sapiens

<220>

<223> glycophorin E (GYPE)

<400> 179

agttgtcttt	ggtagttttt	ttgcactaac	ttcaggagcc	agctcgtgat	ctcaggatgt	60
atggaaaaat	aatctttgta	ttactattgt	cagaaattgt	gagcatatca	gcatacaagta	120
ccaactggtgt	ggcaatgcac	acttcaacct	cttcttcagt	cacaaagagt	tacatctcat	180
cacagacaaa	tggtgataaca	ctcatthaatt	ggtggggcgt	ggctcgtgtt	atttttgagg	240
tgatgcttgt	tggtgttgga	atgatcatct	taattttctta	ctgtattcga	tgactgataa	300
aggcatgagg	atgtggcctg	catgctgcct	gatcttgcct	agaaccagct	gcacctgctg	360
ttctcttggt	atgcaaaactg	gctgcacctg	ctattccttt	gcttatgccc	caaccttggt	420
ctatcctaac	tccctgtttct	cctgcctatt	actgtattct	ctacttctaa	ataaaaaataa	480
aacaaaatac	aaattatt					498

<210> 180

<211> 1233

<212> DNA

<213> Homo sapiens

<220>

<223> KIAA0110

<400> 180

gtgatggcgg	cgccggaggc	ggaggttctg	tcctcagccg	cagtcacctga	tttggagtgg	60
tatgagaagt	ccgaagaaac	tcacgcctcc	cagatagaac	tacttgagac	aagctctacg	120
caggaacctc	tcaacgcttc	ggaggccttt	tgcccaagag	actgcatggg	accagtgggtg	180
tttcctgggc	ctgtgagcca	ggaaggctgc	tgtcagttta	cttgtgaact	tctaaagcat	240
atcatgtatc	aacgccagca	gctccctctg	ccctatgaac	agcttaagca	cttttacoga	300
aaacctttct	cccaggcaga	ggagatgctg	aagaagaaac	ctcgggccac	cactgagggtg	360
agcagcagga	aatgccaaca	agccctggca	gaactggaga	gtgtcctcag	ccacctggag	420
gacttctttg	cacggacact	agtaccgcga	gtgctgattc	tccttggggg	caatgcccta	480
agccccaagg	agttctatga	actcgacttg	tctctgctgg	ccccctacag	cgtggaccag	540
agcctgagca	cagcagcttg	tttgcgcgt	ctcttccgag	ccatattcat	ggctgatgcc	600
tttagcgagc	ttcaggctcc	tccactcatg	ggcaccgctg	tcatggcaca	gggacaccgc	660
aactgtggag	aagattgggt	tcgacccaag	ctcaactatc	gagtgccccag	ccggggccat	720
aaactgactg	tgacctgtc	atgtggcaga	ccttccatcc	gaaccacggc	ttgggaagac	780
tacatttggg	tccaggcacc	agtgaattt	aaaggcttcc	gcgagtgaat	gagtgttct	840
taatcctaaa	aacacaatgg	ctgaattatc	tttctccatg	tggcgctgaa	tcacccatct	900
ggtttggagc	tagagttgct	tcctggtgag	agaggaagca	actctccttc	tggttgtctg	960
cctccctca	gatttccctga	taggctgatg	gcagtgtggt	gtgactgtga	ctgtaatcat	1020
tgctgaacaa	catctctttg	aatcaaagg	tgattttccc	agaggggtgct	gggtcaggca	1080
tttctattag	gagttggaaa	gcaaaaatgg	gtccatagac	actctatgga	ggtgtccctt	1140
tctgctcttt	gctgtgtcct	ttcagaattt	ttaccaggaa	cataatgtgg	atgtgactta	1200
tgaacttaaa	tataaaataa	atagattctt	att			1233